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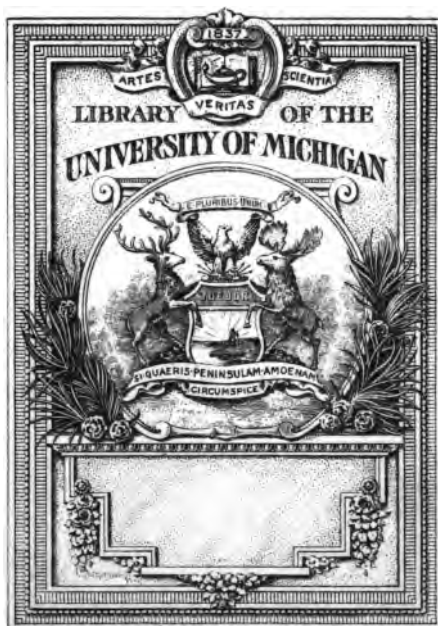
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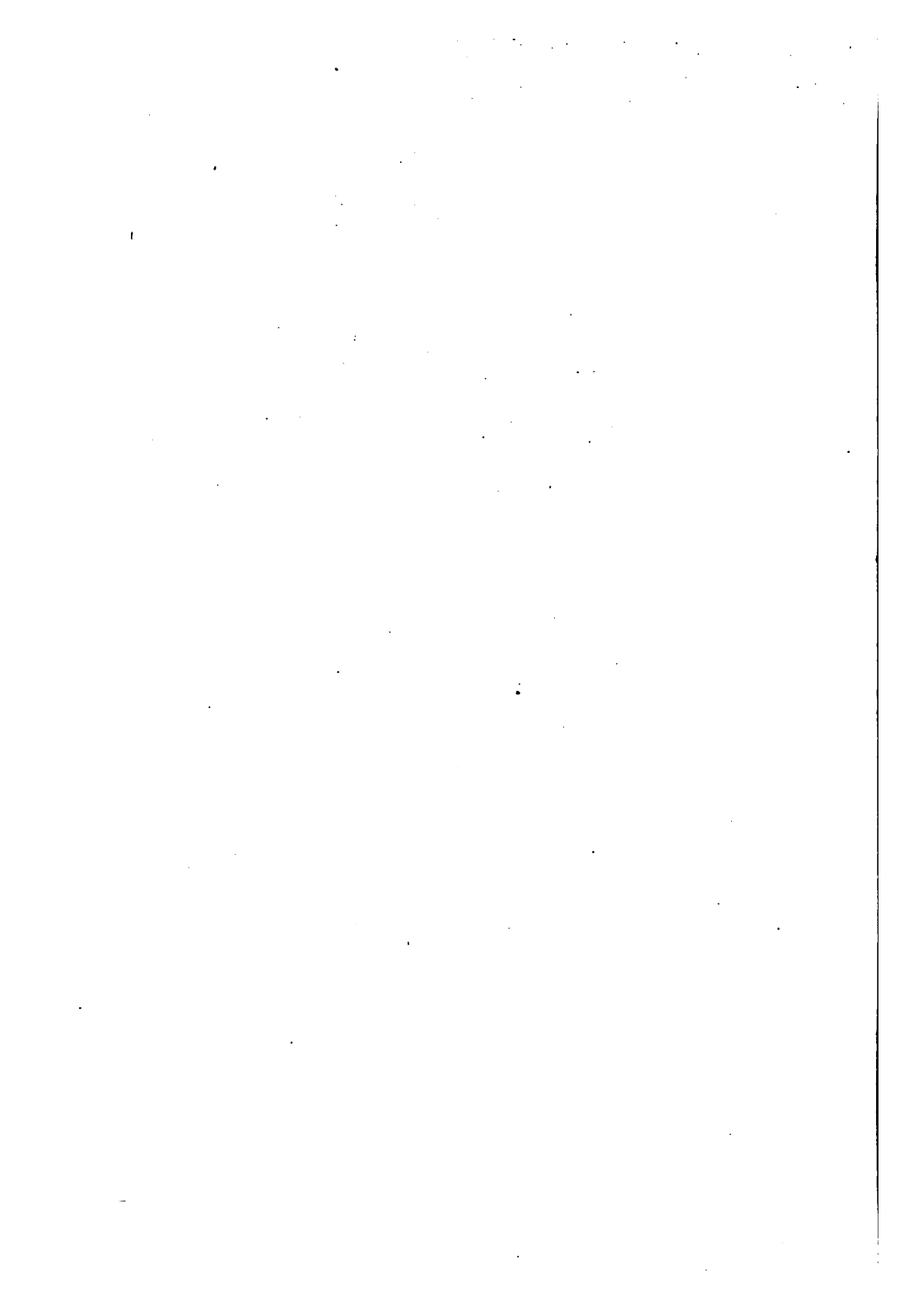
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THE
RELATION
OF 67495
HOMŒOPATHY
TO
NATURAL SCIENCE

BY
EDWARD BABCOCK ATKINS, M.D.
AND
(*Ad eundem gradum.*)

"That which once existed in intellect as pure law, has now taken
body as Nature."—EMERSON.

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PREFACE.

THE following pages are the result of a most careful study of the claims of Homœopathy for scientific recognition;—and their appearance in printed form is in answer to the question often asked me, viz: the reasons for my belief in the *law of similars*, and the value of drug provings.

E. B. A.

Saratoga Springs, May, 1889.

INTRODUCTION.

SINCE the truths of nature need no defense for their existence, a demonstration of their laws should need no apology for its appearance before those conversant with *Natural Science*, and conscious of its relation to medical practice. Both the science and the art of medicine are dependent for their very existence upon the operations of natural phenomena, so every demonstration of a law newly discovered, or a scientific explanation of some truth, long followed, should meet with fair attention from all students desirous of true scientific advancement. The writer of the following pages believes he has not departed from the legitimate bounds of a liberal scientific faith, in preparing this demonstration of his belief and the natural basis upon which it is grounded, and asks from his peers, whose opinions may be broadly different from his own, only that courtesy due all persons whose chief object is the advancement of the science for which we all labor,

and who recognize the bounds of nature as superior to the theories of men. The tendency of modern medicine is into divisions or specialties of study or practice, and the inclination of the professional mind is to follow such divisions as give opportunity for more rapid advancement or glowing achievement. The result is, the unconscious neglect of other branches, and the bringing into undue prominence of certain divisions, whose relative importance will not justify the claims urged by their respective advocates. In this disposition of forces the primal truth is often lost sight of; and the specialist thinks more of his brilliant operation, or the pathologist of his accurate diagnosis, than of the *remedial measures*, which if early and accurately used would have often made their labors useless. The mission of medicine is to cure, and the materials for such fulfillment are found in the provident storehouse of nature, where, if not a panacea for every ill, are found the remedies for many a disease; but, as empiricism or accident has never devised a brilliant operation in surgery, so it can never lead to a scientific and successful use of such remedies. As surgical skill is dependent upon an accurate knowledge of anatomy, so is therapeutic skill dependent upon a scientific knowledge of drug

action; and as an accurate knowledge of human anatomy,—the basis of all surgical skill—was obtained from a study of the tissues when unchanged by disease, so must a knowledge of drug action be obtained when the organs or functions are uninfluenced by morbid conditions. As surgical skill rests upon a knowledge of anatomy, rather than pathology, so must therapeutic skill rest upon a knowledge of the natural action of remedies, rather than upon morbid anatomy as found *post mortem*. As the dissector's skill is acquired by constant and personal practice, so the therapist's skill must also result from constant study and observation of the symptoms of disease, and the action of drugs; and since the anatomist would lose his skill, should he confine himself to the descriptions given by the early masters in anatomy, so would the therapist lose his ability to cure, should he rest upon the classical authorities of his branch; as theoretical knowledge, alone, would circumscribe the surgeon's skill, so it has retarded therapeutic advance, for, as the anatomist must conform his operations to the bounds of nature, so must the other remain within the province of natural phenomena, if he would find uniformity of results; and as theory can find no place in the science of anatomy, so it could

have no place in the treatment of disease, were the laws of nature followed rather than the opinions of men.

Since medical science could have no place among the learned pursuits, were it not for its healing mission, so all pursuits which culminate in this one grand object are equally worthy of attention,—and all who honorably pursue the calling worthy of recognition. For such attainment we should all strive, and ever know that he who most advances to this end has done most for humanity and for the healing art. By various paths we come beneath a common dome to stand, and for a common cause contend. In this temple of medicine, whose beginning reaches back into and beyond the dim obscurity of ages having its foundation in nature, and its final completion in the ages yet to come, how trivial seem the warring factions, and how futile their puny efforts, for the sublime truths of nature are above and beyond the petty theories of men, to be inscribed high in the temple of science. All true students of nature and her laws can have no higher standard of duty than honest allegiance to her teachings; and when such adherence is had at the expense of valued friendships, the knowledge of earnest purpose and true conviction must alone

become the reward for such action, in the trust that more scientific advancement will compensate for the loss. To those whose student days are yet their own, and to others whose minds are not yet fixed in the mold which gave them professional birth, the author appeals that his argument may have an hearing, and once heard, is assured that that which nature has put her stamp upon as true must find lodgment in all minds susceptible of proof,—that should some thoughts here suggested find full fruition in the broad field of medical advance, this labor will have found its reward. Books, like persons, of inherent worth need not long introductions to make them welcome, so much that might be well said here will find more fitting place as our subject wins its way to your confidence and thoughts.

THE RELATION OF HOMŒOPATHY TO NATURAL SCIENCE.

CHAPTER I.

ARGUMENT.

“Defend by argument, justify by reason, establish by proof or evidence.”—GOWER.

THE *Science of Therapeutics* is the ultimate reach of all collateral branches of medical science, the highest in that it is the final sphere of all our medical attainments and the crucial test of all our theories and discoveries,—viz., the *application of medicine to the cure of disease*. It embodies in its formation a knowledge of botany, chemistry, anatomy, physiology, pathology, the cause and clinical history of disease, and a knowledge of the natural action of drugs. These branches are all concerned in the intelligent application of medicines to the cure of disease or the prolongation of life, and the several systems of treatment have been of per-

manent value in just so far as they have been in accordance with the laws of growth, disease, and repair, regardless of the *theory* on which the treatment was based. Since theorizing can produce no change in the cause, duration, or termination of any disease, or in the active properties of medicines except such theories be in agreement with the natural laws of such conditions, it becomes manifest that all systems of practice and all classifications of medicines are most scientific which are in most perfect harmony with natural phenomena. The art of pharmacy may perfect the preparation of the drug, but nature ever says what its effect must be, and thus determines the scientific basis upon which its final value must rest. Each type of diseases has its own characteristics, and although two or more may co-exist in the human system, they are each independent of the other. So in the order of medicines, back in the Morning of Creation every object of natural order, either of chemical or organic structure, had its inherent natural properties stamped upon it in nature's mint, and no amount of theorizing can ever change its natural power for good or evil. Every poison from its earliest record has ever shown its individual power for destroying life in the same manner. So

certain is this that very complete treatises on toxicology have been written and have their recognized place in the practical field of medicine and in the province of the jurist. Reasoning by analogy we would expect to find the same certainty in the domain of therapeutics, and to find the application of medicine to the cure of disease as scientific; but, like all pursuits where wide latitude of theory is allowed, much faulty reasoning has crept in, and instead of certainty we now find confusion of facts and theory, until to now tread the domain of established therapeutics is to travel a labyrinth of mystery and confusion. Upon such search we have now set out, trusting to the thread of natural evidence running through its mazes, to lead us in the direction of light and scientific truth. We can no better do this than to go back to the beginning of our subject, and, by tracing its gradual rise and development, there learn how much is theory and how much is fact.

The science and art of therapeutics had its origin when man first attempted to alleviate the pain and sufferings of his fellow-men by the administration of substances of supposed value in the treatment of disease. The first remedy given constituted its beginning, and down through the shad-

owy age of mythology, over the years of human research and intellectual development it has come to our age, laden with its blessings, and still growing by its continued dispensations. Its study and its practice will ever constitute one of the highest callings of men, for its mission is heaven-born, and its object the alleviation of human suffering. By a process of reasoning natural to the common mind, the first attempts of which we find record at the cure of disease were made in the same manner as were all other efforts in the application of human skill and judgment. Men had found by common experience that to overcome opposition of any kind a counter-force must be used. That to obtain results contrary to such as would occur were nature left to her own efforts, an opposing force must be introduced to change or check the natural course or tendency. In the more common experiences of humanity this fact was self-evident, and soon reduced to an axiom. But little experience was necessary to teach men the full value of such law; they soon learned that if they would protect themselves from sunshine and storm, some barriers must be erected, or found in natural cave or grotto; that if hunger was appeased, food must be provided; that in all conflicts with physical force, physical force

of greater power must be brought into play. Reasoning from simple to more intricate processes of nature the same general conclusions held good, and as they *saw* her workings about them, so they read her hidden pages; but here oftentimes, effects were mistaken for causes, and causes for effects. The common truths most fixed in their minds controlled all their actions, and hence when they saw their fellows racked with pain or bowed in disease, they at once inferred that some force or power greater than that of health had for the time taken possession of their bodies, and that if death was to be averted this disturbing element must be met by some measure more powerful than itself; and that as disease was the enemy of life and strength it must therefore be of the powers of darkness, and thus we find the first records of medicine to consist of rules for the administration of crude materials for the cure of the disease, and of incantations for appeasing the wrath of offended deities. These opinions long held sway, and the practice of medicine for ages was but little else than the operations of ignorance, or magic of the lowest order. Thus we find the art of prescribing for the sick to have had its rise in the ages of crudest ignorance of the subject, and to have long antedated the earliest records of a

knowledge of human anatomy or the functions of the organs men would heal; and more surprising still is the fact that the *method* of combating the disease then having its rise, has come down the ages unchanged, and men of the present time are still basing their prescriptions upon the antipathic foundation then devised, and are still laboring to reconcile the later discoveries in anatomy and physiology with the theories of disease and its treatment devised long before the circulation of the blood was known, or the sciences of chemistry and physiology had their rise, and no wide acquaintance among the physicians of to-day is needed to find men whose treatment becomes more active as the malady becomes more grave, and whose principle of treatment is that severe symptoms must be met by heroic measures, and who measure the curative value of their remedies by the destructive qualities they possess; for still the idea is dominant that the disease must be destroyed, if the patient recover. Thus they argue that the disease has been "thrown off," the "fever broken," the "blood purified," the "inflammation cut short," and the "strength restored,"—terms all true of certain conditions, but coming far short of expressing how the cures were wrought, or what relation the remedies bore to the

disease whose defeat they seemed to have accomplished.

From Egypt, Greece, and through the Hebrew tribes come the first authentic traces of medical history, appearing at first in broken fragments from out the dim obscurity of ancient time, eventually taking shape and permanence in the early history of Greece. *Æsculapius*, its founder, became the deified patron of the Greeks, and the shadowy authority of our art until the time of Hippocrates, whose method first brought the various systems of cure then practiced into logical order, and first gave the growing science its legitimate place in the departments of human learning. Gradually from the obscurity of early time over all the period of human development to the time of Christ, and for sixteen hundred years later, was this growth steadily taking place. By successive steps, and at intervals far apart, was gradually added to the knowledge held by the ancients of the human skeleton, a more minute information of the muscles, viscerae, blood-vessels, glandular structures, and finally of the nervous system: and thus the knowledge of the human form and all its structures became a subject known to men, and no longer the object of mystery and doubt. The foundation of medical science was

then laid, and with an advance into a knowledge of its physiological functions, later supplemented by an accurate knowledge of drug action, the art of prescribing for the sick advances from a study in experiments to a science complete in every part.

By successive steps and at expense of much theorizing, the humoral pathology of Hippocrates was added to the Æsculapian theory current before his time ; then the Dogmatic and Alexandrian schools of philosophy followed, extending their researches deeper into the anatomical structure whose diseases they would heal. These in turn were succeeded by the Empirics, who, denying the value of anatomical knowledge as other than an accomplishment, confined their study to the symptoms of diseases, as giving all indications for treatment, and by so doing gave symptomatology an advance to the point anatomy had reached before their time. Their system of study of the symptoms was not unlike that of the homœopaths of more recent date, but crude from lack of positive knowledge of the natural functions of the body, and of little value in the treatment of disease, since their *materia medica* was of most primitive form, and their knowledge of the curative value of medicine limited to the theories of their time. But despite all its defects their sys-

tem has proven of permanent value, in that it brought the study of symptoms into prominence and thus taught something of the natural language of diseases. Closely following them came the Methodics, with their first division of diseases into two broad classes, thus advancing the art of cure one step more by distinguishing between the broad or general types of diseases, and by their method uniting the system of anatomical and humoral with the symptomatic theories of cure which had preceded them. To this era succeeded an age of experiments and divisions; the disciples of the various systems, following their views to the most extreme point, eventually so far left the fixed landmarks of medicine as to degenerate into an age of wild theories and dissensions, in which all semblance to an organic whole was lost. In this condition the master-mind of Celsus found the art of healing, and from the many theories and fragments of learning chose the natural and rational views of his time, and united the broken theories into a symmetrical whole, and again placed medicine upon a solid basis and gave it an impetus which carried it far into the future of his age. The continual development of anatomical truths, and the theories devised to keep their plans of treatment in accordance

with their advancing anatomical knowledge, gradually resulted in the division of medical men into many sects or theorists, much like the age preceding Celsus. None of the schools were powerful enough to absorb the others to themselves, and the students of corresponding intellects and attainments successfully continued their individual and exclusive plans of practice and study. The seeming disintegration of the science was but the development of its many branches, preparing for another master-mind to again bring order from confusion, and to show the relation of the separate divisions. This needed intellect was found in Galen, who, like Celsus long before, again welded the various divisions, organized the accumulated material, and by his intellect and culture was enabled to develop the needed theories for uniting the various systems, and stamping the whole with his originality, and again, as Celsus had done, sending the impress of his mind far into the future of his age, marking the successive years of the Galenic theories of treatment.

To his age succeeds another of plodding research and more rational investigation into anatomical truths and diseased conditions. The bones and muscles of the body had become well-known structures, and this era of medical development was

devoted to researches into the deeper anatomical structures and their functions, with, as in the preceding ages, changing theories to account for diseases and their cure, as successive discoveries made the pre-existing views no longer tenable. Thus the chemical, vital, numerical, and sympathetic schools of practice came successfully into existence, and corresponding dissensions arose. English, French, and German centers of learning had arisen, and were each intent upon making theirs the dominant schools of practice and study, and to the English physician Dr. Erasmus Darwin is given the credit of, like the masters of early medicine, showing the relation and the dependence of the one system upon the other, and of so uniting the various views as to give to modern medicine its lasting and symmetrical form.

The careful student of medical history will find that the growth of the science has been through several eras, and in regular order from a knowledge of the osseous, humeral, glandular, nervous, chemical, and vital schools of theory and practice; and that the plans of treatment were ever in keeping with the developing science of anatomy, that step by step, as discovery of some anatomical truth proved the existing theories unable to account for

the phenomena observed, another theory of cure must be devised, to be followed by later discoveries and succeeding theories of cure. Thus the plans of treatment were ever dependent upon the general knowledge of anatomy which the age may have held, and were therefore of necessity subject to constant change, for they had no fixed basis upon which to rest.

Thus by processes slow and conflicting had the treatment of disease slowly developed from crudest theory to the condition in which we find it at the beginning of the present century; and by such growth were the first facts tabulated for human use, and pure empiricism reduced to a form somewhat scientific in nature.

Thus far the ground upon which we have traveled has long been familiar to the careful student of medical history, but that upon which we now venture is as yet unknown upon the recognized pages of medical authority. We have followed the gradual rise of our subject, and the completion of its anatomical basis, so far as the unaided eye could go, nor has the far-reaching sight of the microscope in the least disturbed the order of the early anatomists. The rapid advance of the department of physiology has made plain the function of the structures, and pathology

has unlocked the mystery of many diseased changes; but with all this perfection in anatomy, physiology, and pathology, many of the older theories of disease and its cure remain much the same, and thus therapeutics has fallen far behind the other branches in scientific precision, if established medicine be taken as a guide. This could occur but from one of two causes; either less attention has been given to this branch, or its methods were faulty. No certain advance in this department could be made while the anatomy of the body was an unknown realm, and the other elementary branches imperfect, for, as it is the highest of the branches of medical science, it is most dependent upon the others. Thus we find in tracing back the growth of medical science a constant turning of men to such examinations as would serve to perfect the basic elements, until knowledge took the place of doubt, and science of unsupported theory alone.

Constant experiments had attended the practice of the ancients, having for their object the cure of disease, but imperfect in that they were always based on defective knowledge of anatomy, and still more crude information of the physiological action of the remedies employed. By the necessity of the age and the constant needs of humanity, men were

prompted in the application of drugs to the cure of disease long before they had any knowledge of human anatomy ; such administrations were purely empirical, and success but the result of chance in that some remedy had been given having control over the disease, through affinity for the part affected. Manifestly such practice must result in slow growth and faulty therapeutics, since the application of medicine to the cure of disease could only occur in an intelligent manner, after its basic elements were understood ; and yet the history of so-called scientific practice records the strange phenomenon of the "successful" treatment of disease where ignorance prompted the multiple prescription, and crude theory explained its action. This is neither logical nor scientific, and yet men are found practically doing the same to-day : before their knowledge of any drug action is complete, or at all advanced beyond the most general principles, they apply the remedy, and then presume to set the bounds of its activity and usefulness in accordance with some theory of action or classification of medicines, long before devised. Each generation followed the methods of its predecessors, and in the same general manner attempted to dislodge the disease. While always doubting the accuracy of their anatomical knowl-

edge and always endeavoring to improve it, they hardly seem to have questioned their methods of obtaining a knowledge of the curative value of the drugs they were using, and so through all the ages we find them pursuing the same general plans of treatment, and following the same experiments to determine its value. Various substances were used, and others sought for, but their administration to the sick was always in accordance with the same preconceived theories of disease, and the extreme latitude of the power of the *vis medicatrix naturæ*, in its efforts to throw off disease, and thus their efforts increased in proportion to the severity of the morbid action they would heal. Empiricism being their guide, and believing that force must be met by force of corresponding action,—or severe symptoms by heroic measures,—they blindly increased their doses and their bleedings, never seeming to doubt but that *all* the symptoms came from the disease, and that until such symptoms abated their efforts must not cease. Thus a patient suffering from an acute inflammation, and another from a specific fever, were alike purged, vomited, and bled, the action of skin, kidneys, and mucous membranes excited, and food withheld, that the disease should find it impossible to re-

main. ["Cullen's Practice of Physic," ed. 1805, p. 138, 164, 166; "Sir Astley Cooper's Lectures," vol. i., p. 52, 58, ed. 1825, on Inflammation; "Paine's Institutes of Medicine," eighth ed. 1867, p. 732, 736, and pp. 736-741.] The changing views of practice from the antiphlogistic to the mixed treatment, resulting from such practice as had been taught and followed, finds apt expression in the elegant and attractive lectures of Sir Thomas Watson ["Practice of Physic," fifth ed, vol. ii., pp. 123-126, and elsewhere], becoming more decided in the later authorities following them, notably Flint, Murchison, and others, to eventually meet its most emphatic denial in the exhaustive text-books and lectures of Prof. A. L. Loomis, who in the treatment of pneumonia and the fevers repudiates the value of the common sedatives, aconite, digitalis and veratrum viride, as well as the more historic and so-called active remedies of the antiphlogistic period of medical history.

Such having been the faith of the fathers, and doubt characterizing the teachings of the present authorities, need we wonder that the sons still cherish the same ideas, and that too often now any increase of symptoms but means increased quantities of medicine given, for, lacking other authority,

experience yet remains the guide to practice and authority for treatment.

In full support of our argument at this point we quote from the exhaustive work on "Pharmacology, Therapeutics, and Materia Medica," by Prof. Brunton of England, (third edition, American issue), than whom no higher authority could be found :

"*Experiments in Disease.* In the present state of medicine every attempt which we make to treat disease by the administration of medicine partakes more or less of the nature of experiment, because we can rarely be absolutely certain that the drug will have precisely the effect which we desire. As the phrase is, 'We try one medicine, then we try another'" (p. 52).

The student having been taught that his control over disease must come through the action of medicines, rests insecure until he has exhausted the "plans of treatment" of his chosen authorities, or the patient escapes his grasp. When theories of treatment are indorsed by high authority, and the various members of the profession try to follow them, dissatisfaction and disappointment result as a rule,—for, lacking the skill or judgment of its founder, his emulators stum-

ble and fail, where he might have gone securely; and thus we find that aconite, digitalis, veratrum, gelsemium, morphia and quinine, in less original hands, and in active quantities, have proven as potent for evil as had the lancet, mercury, and emetics; until now many deny their usefulness where but recently they were much valued. No one need be long in active practice among the dominant members of the profession to have this conclusion emphasized, that while modern treatment is less likely to be followed by slow convalescence, it has no less power for working speedy and fatal effects. As one too many bleedings has often deprived the patient of life soon after, so one "full dose" too much of some powerful sedative to the circulation has often stilled a weakened heart forever,—for at a certain point in cardiac weakness, the arterial sedatives produce such a depressing effect upon certain nerve centers as to make the continued action of the heart impossible; and yet for a long period of years their use, in marked doses, in such conditions was advocated, and is yet largely used, while the boast is made that improvement in the older plans of treatment has occurred. The fallacy in such treatment is becoming evident, and its advocates are learning "by experience"

that the remedy having control over arterial excitement alone fails to relieve the symptoms coming from a specific poison. Thus much in keeping with the early theories is the reasoning we yet hear, and all unconsciously men pursue the well-worn groove of the ages while deluding themselves with a fancied advance in modern learning. So long as the administration of remedies is in accordance with the theories which prompted the older plans of practice, there can be but little hope of scientific advancement. To change from antiphlogistic to antipyretic is but changing weapons—the method of attack remains the same, and with this method our argument now has to do.

CHAPTER II.

IN the preceding chapter we have carefully traced in outline the growth of medical science, and briefly pointed to the seeming defects of the system in its study and experiments. Our examination had led us in the historic search to the beginning of the present century or near it, while the citations of authorities brought us to the present time. It now becomes necessary, for an intelligent advance into our subject, to examine the claims of Hahne-

mann and his followers, to find what basis exists for their claims to a more scientific application of medicine to the cure of disease, and he will prove recreant to his scientific trust who lets error or prejudice so warp his judgment as to give the question unfair attention. Judged by all previous experience in medical growth, this system of Hahnemann could have had no seeming promise of growth or permanence, and yet we find it, a century later, now acting as the most dominant element in the field of mooted medical questions, and the present cause of bitterest controversy. Judged by all logical conclusions, such could not be the case had the claim none but theoretical basis.

As yet he is an unrecognized authority in the annals of historic medicine, and his teachings are ignored by the general school of practice. Grown accustomed to fixed lines of thought for ages, the professional mind of his time and since seems unable to adjust itself to the change his discovery must compel, and has ever placed itself in opposition to his teachings, forgetting that if his claim has the endorsement of nature their opposition must fail, and humanity is meantime debarred its advantages. Those who have been and still are its most bitter opponents are men who, trained

in the usual manner and of positive convictions, have at first examination found its claims in such apparent opposition to their own, as gathered from authorities and experience, that with that characteristic feature of the human mind, and with a preconceived bias against the claim, they have grasped at its more glaring defects, and in such condemnation have denied the truthfulness of the whole subject. Not finding perfection, and forgetting the defects of their own system, they unhesitatingly deny the possible advantages it may give. While such conclusions would be deemed most unscientific in all other branches of natural science, its methods here have ever had the approval of the main body of the opponents of the practice based on the *law of similars*.

Chance having taught Hahnemann that the excessive doses he was using often produced an aggravation of the symptoms, while much less of the remedy would control them, he instituted a series of experiments resulting in the discovery of a fact heretofore unrecognized, or if known considered one of the lesser and more curious features of medicinal action, that a *similarity of symptoms existed between those produced by the remedy, and the disease over which it proved curative*. This fact

he epitomized in the phrase *similia similibus curantur*, in opposition to the current belief of his time, which he expressed in the phrase *contraria contrariis curantur*. Whether to Hahnemann shall be ascribed the credit of first formulating the two expressive phrases, markedly characteristic of the systems they represent, or not, is of little importance to our argument, for with the fact rather than the phrase we now have to do—while the question of discovery and phraseology is being debated, as to whether the credit shall be ascribed to Hahnemann or Hippocrates,—a worthy source in either case.

With his innovation was begun the strife yet waging between the modern classes of medical men, wherein ridicule, perversion of facts, and oftentimes unwarranted bitterness have taken the place of unbiased search and logical proof. To ignore a subject is to come far short of proving it wrong on logical grounds, nor is condemnation without well-supported reason in accordance with scientific claim, while ridicule comes far short of reaching the height of logic, and ever proves the dearth of logical material. That the claims of homœopathy have met most unfair treatment at the hands of the dominant school of medicine, but little

examination into the "regular text-books" will show. Ridicule, denial, perversion, and but partial recognition, have successively characterized their writings throughout the century, culminating now, not as to its claim to truthfulness, but in the question of authority and source.

"The mere fact that a drug in small doses will cure a disease exhibiting symptoms similar to those produced by a large dose of the drug does not constitute it a homœopathic medicine, for this rule was known to Hippocrates, and the rule *similia similibus curantur* was recognized by him as true in some instances. But Hippocrates was not a homœopath, and he recognized the fact that, while this rule was sometimes true, it was not invariably so."—Brunton's work, p. 10.

Men of all ages have unconsciously taken their mental bias from the common beliefs of their time, and in our own age the candidate, coming most often from the common walks of life, brings for the attainment of his medical honors the mental calibre and bias of his class, and while professing liberality of belief proves himself dogmatic and exclusive. Having been cradled in a certain faith he finds himself unable to bend his mind to another, and while believing his conduct praiseworthy blindly bars his

own and his profession's advance. A medical education, however perfect, falls far short of producing originality of character, since such power of mind is dependent upon natural endowment; and thus the great mass of students find it much easier to conform to their acquired theories and beliefs than to rise superior to them, and, leaving the guidance of authority, examine nature for the truthfulness of the claims they urge.

Were the same methods followed of denying the true with the false teachings of Hahnemann's contemporaries, many a valued precept and some of the most glowing names would lose their place from the historic page. Boerhaave, Stahl, Cullen, Brown, Darwin, and farther back even Galen himself, would be shorn of all their glory, for they all were faulty in many points as was Hahnemann. The truths they each in turn taught were often so mixed with error and biased by theory as to be hardly discernible amid the mystery and ignorance surrounding them. Vital, chemical, humeral, numerical, sympathetic, and spiritual schools of belief and practice were then rife, and Hahnemann but applied the theories and beliefs of his time to the explanation of the truth it was his fortune to discover, as did the others in their efforts to explain the cause and nature of the

diseases they would cure. He but reasoned, as did they, with the uncertain light which the science of his age gave him, and as their theories have long been left far in the background of scientific advance, so must be the visionary views which he held ; and as the single gleams of truth which they each in turn discovered have grown with the advance of learning, so must that which he discovered, if grounded in nature.

This innovation was of such kind as to seemingly oppose all advance in the treatment of disease, and thus met the combined opposition of his contemporaries ; while the mystical ideas and faulty language of his era, still adhering to his teaching, invite the opposition of the present time. Had there been no truth in his claim of the discovery of a natural fact or law, it must have long since lost itself, as have many of the theories to which his age gave birth ; but instead it has lived, although always on trial for its existence, and by its own life has kept alive the visionary fancies with which it was at first attired, and now at the end of a century retains all of its original force and power, while the methods of cure as taught by his contemporaries have been marked by change and displacement by each generation of their followers.

If it is urged that advance in knowledge has caused these changes, then the present plans of practice pursued by the older school should have farther digressed from the seeming fallacies Hahnemann taught; but instead we now find its opponents using and advising the small dose, the shorter intervals, the single remedy, the trituration, the globule or pellet, and the terms and definitions once peculiar to homœopathy alone: thus proving that while they deny its value and its law, their whole improvement lies in closer approach to its system.

Hahnemann's *discovery*, like that of many others in medical science, was at first so buried in theoretical or visionary explanation as to long remain almost unknown. As the early anatomists with their crude theories of disease devised their explanations for the facts observed, so Hahnemann, with his imperfect knowledge of diseases, gave his theories of cure; and as the medical fathers discovered that an accurate knowledge of anatomy was necessary for an intelligent understanding of disease, so Hahnemann discovered and taught that to be *scientific* in *treatment* one must be *accurate* in one's knowledge of drug action on the healthy subject, and then observant of the law of similars in prescribing. This

is, in brief, the great innovation of Hahnemann, that *similia similibus curantur* is the only known rule of therapeutics having the endorsement of nature, thus proving it to be a *law* of the relationship existing between disease and its most curative remedy, and that testing drugs upon healthy persons is the only way of learning their true action, and thus determining their therapeutic value.

The so-called "infinitesimal dose" and its accompanying conclusions were of later development, and the result of theory based upon the operations found to follow the use of the small doses at first used in application of the law then first brought into prominence, and are by many of their opponents yet regarded as the chief element of faith among the students of homœopathy,—proving their appreciation of the system to be as incomplete, as was its founder's knowledge of all its relations to disease and perfected medical science. *Were materia medica and therapeutics* perfect in their workings, no excuse could be urged in favor of an improved system of study and application of medicine to disease; but as change and experiment still constitute its methods, and human judgment and theory determine its formation, he who would fain rest in the belief that a power greater than human research

and conclusions must eventually determine the value of medicines in disease, and their power of control over its effects, must look elsewhere for such certainty, or far into the future for such perfection.

To such an one the *law of similars*, freed from its errors and perfected in its application, comes as the only known guide to such fulfillment, and in the present condition of scientific controversy and doubt becomes the only authority which places the treatment of disease upon the same natural basis as are all the other branches of medical science; and to those who labor for such perfection there can but wait a meed of honor equal to that obtained by specialists in other branches of more brilliant but no greater importance.

No argument is needed to prove that therapeutics has not reached that same condition of perfection which characterizes the other branches of medicine in scientific method and agreement. While the student finds the text-books on anatomy, physiology, chemistry, pathology, symptomatology, and toxicology, in uniform agreement as to basic principles, although coming from various authors, and all in accordance with the laws of nature underlying them,—to which condition surgery and obstetrics also con-

form until questions of treatment are reached—he finds therapeutics, as commonly taught, the one great exception. While the first-named branches all rest upon a natural foundation, the application of medicine to the cure of disease rests upon human experience and conclusions alone, and the theories of therapeutics thus constitute the one exception to the claim that the complete science of medicine is grounded in nature, and that physicians are thus working in harmony with her laws.

The student, having mastered the basic elements of his profession, and having become somewhat familiar with his materia medica and therapeutics, becomes a law unto himself, and having tried the plans of treatment advised by his authorities, and judged of their value by his results—success being determined by his *proportion* of cures—he accepts their teaching as final, and his treadmill of professional life has begun. Should his results argue more of failure than success, he grows to doubt the wisdom of certain plans of cure; and having found the other elements of his professional learning to rest upon a fixed basis, while authority of his masters alone has determined the system of therapeutics he follows, he argues that the same rule of action which authorized their experiments in disease ex-

tends also to himself, and that his mission, like that of those before him, is to search the whole domain of nature, and to there find, if possible, some more certain or powerful substance for the cure of disease ; and so long as his experiments are under the shadow of "regularity" he continues an honored member of the class which produced the system under which he labors ; and thus we find the profession divided into two broad divisions : those who develop "plans of treatment," and those who blindly follow them : and thus is demonstrated the fact that *therapeutics*, as commonly taught, being farthest removed from a *natural basis*, is with its combination of human theories and results most faulty of all the branches. As men depart from the immutable laws of nature their reasoning grows visionary and their results uncertain. Repetition of experiments in the same unvarying round characterizes the old materia medica back through all the ages ; changing fashion in the treatment of disease marks each successive period ; remedies have risen into prominence to be by the next generation ignored ; successive theories intended to explain the principles of cure have slowly followed each other, and still the same experiments and newer theories are devised in the effort to improve the art. Like a rudderless ship at sea the

treatment of disease has drifted from the broken headlands of one system to another, sometimes almost engulfed in speculation and doubt, and then again making slow headway under more careful guidance, against the heavy sea of ignorance or the false lights by prejudice and zeal erected. Volumes on *materia medica* have been written, agreeing in the natural history of the substances used, and their chemical structure so far as determined, also in the history of drugs as their poisonous effects were discovered,—but when we come to look for such uniformity in their application to disease we find but conflicting evidence and theory instead; a proof of the disposition on the part of men to shape the department of therapeutics to their preconceived opinions of what it ought to be, and what the drug ought to do when administered, thus ignoring the fact or law that ever shapes all drug action, and ever teaches men that they must conform their operations to natural evidence if they would become scientific. Such having been the order of growth of established *materia medica* from its beginning, its present want of uniformity becomes the proof of its need of more scientific observations, or improved system of study; for if three thousand years of study has resulted in the production of a work still in need of the same

experiments, then manifestly its methods are faulty or its system wrong.

The question thus resolves itself into this: Either men have thus far failed to see the evident pointing of nature in such direction, or the wisdom of Creative Might saw fit to provide the germs of disease and the remedial elements for their control, and then left it for man to decide their relations; thus forever removing the methods of cure from the order of natural science, and so leaving it at best but an art without scientific precision; or else in conformity to all her works nature has devised some law of action which shall determine all these results and so bind the several branches of medical science in symmetrical form and harmony. The *law of similars* is advanced by its advocates as evidence of such natural plan, and to its more intricate relation we will now turn.

CHAPTER III.

THE careful student of medical science finds that all his elementary studies conform to the requirements of fixed rules, of such importance as to reach the domains of action always under authority of fixed laws. His study of *anatomy* must conform

to a fixed basis, and that any disagreement between his own and the conditions or results laid down by the authority he follows in dissections are ever attributed to his own want of skill or observation, since nature alone determines the form, conditions, and relation of the structures he studies. When his knowledge of anatomy is perfected, and he proceeds to a study of the functions or *physiological* action of the various organs, the same care on his part is exacted ; and when the function of a part is once determined, it is determined for all time, since all the organic functions are under the unchanging laws of nature ; again, should these organs and functions become changed by disease, such changes always conform to fixed laws of morbid action, and the study of *pathology* is also found to be under as fixed conditions as were the natural form and functions of the part. In the development of his *materia medica* he finds the natural sciences of botany and chemistry as its basic elements upon the one hand, while the science of *toxicology*, or action of poisons, upon the other completes its general outline ; and when he comes to the study of disease itself, he again finds that all morbid conditions have certain well-defined laws of action for producing the symptoms and signs upon which he bases his *diag-*

nosis and *prognosis*. Thus from his earliest lesson to the final one, ending in the need of his choosing and applying the remedy to the disease, his study has been within bounds well defined by nature, and if his farther studies be also based upon natural foundation, a *law* for such action must be found, rather than some theory of cure devised by men; for as man can never create the germs of disease, nor the medicinal substance for their destruction, he is equally powerless to say how they shall act, or by what language they shall make their relations known, and therefore the science of medicine, in all its parts, is under the domain of natural laws. All the elements of its formation having been *created* must ever conform to the laws governing such creations. Tissues and organs may grow and waste, remedies may exercise their control, but, independent of the opinions of men, such actions must ever conform to creative law.

In all the departments of our subject, investigation, research, and experiment ever give the same unvarying results, and can be predetermined with all the exactness which characterizes the other departments of natural science, up to the treatment of disease. Here continued examination finds no break in this natural order where the conclusions are based

upon natural phenomena ; for the treatment of disease becomes uncertain only when wide latitude for theory takes the place of careful observation. Men have followed and still do follow the indications of nature up to a certain point, and then, in keeping with some honored law or maxim of the older authorities, leave certainty for uncertainty, the promise of uniform success for inevitable failure ; for as all our efforts in keeping with natural requirements are certain of uniform results, so is failure certain when manipulating the elements of nature according to the conflicting theories of men. The chemist cannot say how the atoms *shall* combine ; but how they *do* ; the pathologist can not say how the typhoid germ shall do its work, but how it does ; the surgeon can not direct how the fractured bone shall unite, but must rest content in nature's plan. He assists, but can not direct the process ; so the therapist must conform his efforts to the unchanging fiat,—he may administer the remedy, but nature determines the effect.

However plausible theories may seem, and however full of promise, when put into operation speculation alone can attend the result in the future, as in the past ; for unless the theory is grounded upon fact a conflict of forces must occur, and nature being

immutable, human failure must result. Recognizing, then, that we are in a domain whose laws are determined by nature both as regards the disease and the remedies for its control—for as man could produce neither, neither can he determine their laws of action,—we must search for the natural laws about us, if we would become scientific in our results.

That a scientific treatise on *Toxicology* could have been written is proof sufficient that all organic and inorganic substances, which have the power of destroying human life, have also the inherent power of always doing so in the same manner if the conditions be unchanged. In some seeming exceptions to this rule, where death has occurred before sufficient time has elapsed for the full effect to become manifest, it has been found to proceed from the most primary changes wrought by the poison upon the deep nerve-centers, and to thus be no exception to the general rule, but rather evidence of the deeper effects of the drug. Acting upon this well-established law, that poisons have a *universal language* of their own, by which they make their presence known in the human body, their classification has been determined according to the action they exhibit and the part they disturb ;

and further still in keeping with such law have the physiological and chemical antidotes been determined.

Medical jurisprudence is also dependent upon this knowledge for its value as a method of determining the cause and mode of death in all cases of suspected poisoning: so certain are the changes found *post mortem*, that courts are influenced and juries charged in accordance with such changes as the organs or tissues are found to have undergone, where an irritant poison has caused death. Why all this unquestioned confidence, but that poisons have special affinity for certain structures of the body, and however and wheresoever administered, always find their sphere of action, and by such action destroy life? The very large doses sometimes given with benefit are no exception to this rule, since in these cases *two* elements are at work in the system, or the nervous forces are so depressed as to prove but partially responsive to the drug—as is instanced in the use of alcohol after snake-bites, or use of digitalis in delirium tremens: here the doses which would in all other conditions prove serious or fatal but act as *antidotal agencies*, and are thus no exception to the well-established rule.

By this order of phenomena originated in nature's

eternal plan, all poisons, and hence all remedies from the realm of poisons, are inherently endowed with a power for disturbing or destroying the vital process in varying degrees up to complete extinction of animal life. Between the vital processes of growth and repair, and the physiological action of poisons, there exists an incompatible relation. The two forces can not act in the same organism at the same time and a perfect condition of health continue. Between the tissue element and the poison there can exist no permanent relation or combination of function, and where a certain kind of unstable chemical combination occurs it is always at the expense of the organized tissue elements; and if the natural action of the part again occurs it is after complete elimination of the foreign or poisonous element. Between them, then, there is no reconciliation; neither can overreach the bounds of its own activity and thus do duty for the other; neither can the first become tolerant of the second, for that which is sometimes called toleration is but slow poisoning, as the final result will always prove, in broken health from disturbed function or diseased organ: and as often as tried will be demonstrated the fact that drug action and vital action are antagonistic forces, and ever arrayed against

each other. Victims of opium, alcohol, arsenic, or any other kindred habit all become proof of this claim, since their "toleration" is at expense of strength. Again, the same antagonism of forces must occur, but in lesser degree, when the quantity of poison is reduced so as to be borne for the time, for the small quantity partakes of the same nature as the parent bulk and has the same affinity for certain structures in which to exercise its activity; and if the amount be lessened the time only need be increased for its use, when the evidence of its presence will become manifest in characteristic change or symptoms. Slow poisoning produces death no less surely than by rapid action, and thus whether administered with intent to destroy life, or for a fancied curative power, the poisonous effects are always the same, and sooner or later developed, if in diseased conditions, masked by their symptoms, but none the less potent for evil. The same creative fiat which said these substances should be poisons, also decreed that under other conditions they should become curative remedies, and the point at which the one action merges into the other is not well defined, for it depends largely upon the condition of the person at the time of its administration whether the effect shall be curative, or more or less

poisonous. The same substance which in certain conditions of disease would prove a remedy, would in other diseased conditions prove a poison, of varying degrees of power; so that when choice of a remedy is made it will depend largely upon the knowledge and skill used in its choice if it prove a remedy or its opposite. By a natural division, all these substances having remedial value fall readily into *two orders*, viz., those *foreign* to the animal economy, and those *natural* to it; for a very considerable number of the well-known remedial elements are but restorative or proximate principles of the human body. Under the first order are all those substances capable of producing a change from that of health in the functions or structures of the body; in the second order can be placed all those substances having their counterpart in the constructive elements of the body. In recognition of this fundamental law or principle of drug action, attempts at the classification of medicines have been made, but instead of following nature out in her arrangement the authors have attempted to build upon this natural basis a superstructure much in keeping with that so long revered, and by so doing have done violence to the indications so well defined; and many a remedy is thus found in a class which,

if followed in treatment of disease, will limit its use to narrow range or lose its value altogether; for nature rather than man defines each substance's range of action, and any classification which conflicts with this law will tend to restricted use. When carefully examined no two remedies have yet been found having just the same sphere and power of action—they become analagous but not alike, and so refuse to come under any well-marked class—nor can any amount of theory or plan of classification bring them there, and yet be true to the unchanging laws of nature. *From the earliest* records of medicine down to our own time that department of the works on *materia medica* devoted to the study of the physiological action of medicines has been growing more replete, and in the modern "text-books" much more space is devoted to such inquiry than is given to it in the older works now upon our shelves,—serving as witnesses to the truth we urge. This can but point in one direction: either men are growing to believe that skill in the use of medicines is proportionate to their knowledge of drug action on the human system, or that the *materia medica* is to ultimately become a store-house of physiological research, rather than of therapeutical knowledge; for such condition must in-

evitably result, unless the ability to apply this knowledge to the treatment of disease keeps pace with the advance into the realm of drug action. That the established system of therapeutics does not do this, no extensive reading of the authorities is needed to prove, for it will be found that just in proportion as the pages devoted to the study of the physiological action of the drugs multiply, that proportion devoted to their application in the treatment of disease contracts. No better proof of this could be urged or desired, than an examination of Prof. Brunton's latest work, coming from the highest authority upon his side of the question, the author being a member of the Royal College of Physicians, and "Examiner in Materia Medica for the Universities of Oxford and of London"; while the American issue of the work, by Messrs. Lea Brothers & Co., is advertised to the profession as being most perfect and replete in the department of "physiological action." An examination of its pages, under the division devoted to the consideration of special medicines, rather than general principles, will discover under the separate headings the following result: *Aconite* has four pages devoted to the study of its physiological action, and less than one to its "therapeutical uses." *Antimony* has

four to its action and one page full to its "uses." *Lead* has four pages devoted to its action and *twelve lines* to its uses. *Phosphorus* has three pages devoted to its action, and but *eight lines* to its uses. *Opium* has nine pages given to its action, combinations, and poisoning, and three pages to its *local actions*, they covering its internal uses. *Quinine* has three and one-half devoted to its action, a trifle over one to its uses. *Strychnia* has four pages defining its action, and one to its uses. *Gelsemium* has one-half page given to its action, and *two lines* to its uses. *Belladonna* has four pages devoted to its action, and one-half page given to its internal uses. *Digitalis* has seven pages given to general considerations and action, and one to its use. *Veratrum viride* has one page given to its action, and *two lines* to its uses—and thus through all the list of remedies.

Without a more or less complete knowledge of such action, no remedy for the cure of any disease could be known to exist, for all persons know that if a substance have control over a morbid condition, it must be through having some action peculiar to itself, and hence we find the therapeutics of all systems based upon such knowledge, if at all accurate; and as a natural result we would expect to find

those most successful in the treatment of disease who are most skillful in utilizing such knowledge. No advance in the department of therapeutics could be made, however complete the mastery of pathological changes, were there not a corresponding advance made in the knowledge of drug action. As all diseases are the evidence of functional derangement or anatomical change, so all remedies for such conditions must have the inherent power for acting upon the parts affected if they *produce a cure*, or else the cure results independently of the action of the substance given. So evident is this fact that it could be reduced to an axiom, and all successful treatment of disease be adduced in proof of it. As diseased conditions divide themselves into two broad and distinct divisions, of functional and organic, so the action of poisons is also divided by nature into two distinct classes, those producing change of function only, and those producing change of tissue or organic structure. Again, as there are some morbid conditions, beginning first as functional derangements, but, by a continued disturbance of the part, eventually changing its structure, so there are found among the drugs a class whose first perceptible action is to disturb the function of a part, but if long continued will by

such disturbance produce a change in the part itself.

This is instanced by the continued use of digitalis, or alcohol, upon the heart, or of cantharides upon the kidneys. Through nervous influences alone the first changes are produced, while such action, if long enough continued, will produce a change in the organs themselves.

We thus find the broad types of disease to have their counterpart in the range of action of the distinct types of poisons, as proven by their physiological action; and this fact becomes evident from a study of symptomatology upon the one hand, and pharmacology upon the other, and like all natural phenomena it needs no theory for its demonstration, since observation and comparison determine the facts.

Unless the claim could be advanced and successfully defended, that the *whole physiological action of remedies*, when introduced into the system, is spent in combination with the diseased conditions for which they are given, then there must result a *combination of symptoms*, partly owing to the disease and partly to the medicine itself. Such being the undoubted condition, nearly always occurring in the active treatment of disease, it follows that no ac-

curate study of the symptoms of *either* could take place in *such combination*, and as an inevitable result the early records of medicine are replete with errors from this source. Much has been attributed to the curative value of medicine which has since been found to belong to the natural history of the disease itself; and, upon the other hand, many symptoms long attributed to the disease are now known to belong to the physiological action of the remedies used; and in such connection it can not be successfully refuted that if we would know the accurate clinical history of any disease we must learn it from a study of such disease, when uninfluenced by drug action; and also that if we would know the full and perfect range of any drug action, such knowledge must be obtained from a study of such drug action when uninfluenced by a diseased condition of the body;—in short, that we must determine what its action is upon the healthy subject. While acknowledging the necessity of leaving the course of the disease undisturbed by medicine, if the accurate clinical history be determined, the profession has steadily denied the second claim, or the need of “proving” the drug upon the healthy subject, as urged by Hahnemann and his followers, and have attempted to justify such denial by claiming that a

therapeutic knowledge of any drug could only be determined by actual tests upon persons suffering from disease, since to know the physiological action was to come short of knowing the curative value of the substance. While such claim is in perfect keeping with the system resting alone upon experiment in disease for its knowledge, it fails to prove by such denial that no more scientific way exists, and if the *law of similars* be denied there is no other guide known than continued experiments; and herein is seen the inevitable shaping of the system to the theories it holds. In illustration of the more conservative and illogical views held by many on this point and others connected with it, I quote:

“ Now, although homœopathy is fashionable, when a case actually requires medication you can make very little if any rational use of its so-called principles, which rest on the following foolish creed: 1st. *Curative remedies for the sick can be selected only by a study of provings on persons in health.* 2d. *Every remedy must be given by itself.* 3d. *The similar and single remedy must be given in its minimum dose, i. e., the smallest dose sufficient to effect a cure in the case.* These are the three legs upon which Hahnemannism is supposed to stand; an *essential* triune, an *inseparable* unit. Violation of any of these prin-

ciples by the faithful is a confessed rejection of the whole.

"You will observe at a glance that this creed is exactly two-thirds nonsense; and that the first and second postulates are sophistical and should be rejected, and that the last is a rule that nobody denies, that every rational medical man has recognized since the days of Methuselah, and can not in any sense be monopolized by homœopaths."—*The Physician Himself*, second ed., pp. 142, 143, by D. W. Cathell, M.D.

In demonstration of the more liberal, because more advanced, views on this same subject, I again quote from Prof. Brunton's work, and leave those of Dr. Cathell's opinions to reconcile the difference of belief:

"EXPERIMENTS UPON HEALTHY MAN.—As the action of drugs upon animals is, to a certain extent, different from that upon man, it is undoubtedly desirable to ascertain the action of drugs by experiments upon healthy man. This is all the more necessary because by experiments upon animals we are able to discover only the ruder differences between drugs, and we can not ascertain the finer shades of action, both because it is in man alone that these finer differences occur, and because it is he

alone who can give information regarding slight changes which he can perceive in his own organism, but which are imperceptible to others who may be observing him. There is no doubt that many observers of this sort, several of whom have been homœopathists, have done good service to medicine by carefully noting and carefully comparing the symptoms produced by various drugs. These observations, however, are liable to fallacies, as I will presently mention."—Brunton's work—before referred to, p. 51. An examination into the "fallacies" which Prof. Brunton points out, as likely to have occurred, will be found to consist of a possible error on the part of Henrich and Dworzak, in not having specifically stated that the pain in the face, from which the experimenters with aconite suffered, did not come from the irritation of decayed teeth, which they may have had; and in the crowning experiment of all by Hahnemann with cinchona bark.

"Hahnemann for sake of experiment took for several days four drachms of good cinchona bark twice a day, and then began to suffer from all the ordinary symptoms of intermittent fever. On leaving off the drug he soon became quite well. He therefore concluded that cinchona bark, which was well known to be a remedy for ague, could also produce it.

“ Every one who has an extended experience of ague knows well that when patients have been free from any symptoms of the disease for a considerable length of time, they may be caused to reappear by various conditions, and more especially by anything that irritates the stomach or intestines. I have not myself seen a case of ague brought on by the administration of cinchona bark, but I have seen it occur after a succession of heavy dinners, in a patient who had been long free from it. Powdered cinchona is certainly irritant, and Jörg found that in two-drachm doses it might cause flatulence, irritation, and nausea. Hahnemann took it in double this dose, and in all probability the ague which it brought on was simply due to gastric irritation, and not to any specific action of cinchona. Had Hahnemann taken any other irritant which disagreed with him—say tartar emetic, or perhaps even pork-pie,—he might have suffered in the same way, and yet pork-pie could hardly be said to be a specific for ague.”—Brunton's work, p. 52. It will thus be seen that the *possible* fallacy in the deductions drawn from Hahnemann's experiment is based by Prof. Brunton upon *three suppositions*: First, it is *presumed* that Hahnemann had had intermittent fever, and that the bark but acted as an “irritant” to pro-

duce the chills again ; second, that, as experience had proven, the cinchona bark *might* produce nausea, flatulence, and irritation ; and, third, that any other irritant—say tartar emetic, or pork-pie,—“ *might* ” have caused the symptoms in his case.

To this experiment Hahnemann's opponents have ever turned, as if its possible “fallacies” could in any way now disturb the working of the law he demonstrated, and from which fact he “formulated the doctrine of homœopathy.” Just how it could happen that a person could take eight drachms of “good cinchona bark” for several days in succession, and the “specific action of cinchona” not occur, but gastric irritation only, Prof. Brunton does not stop to explain ; nor does he account for the serious aggravation so often seen from the excessive use of quinine, in the treatment of ague—although he has never seen ague “brought on by the administration of cinchona bark.” His fear of “fallacies” in the provings is evidence of the weakness of the objections urged against the principles ; but since he so generously endorses the advantages of proving medicines upon “healthy man,” we can but overlook the simplicity of his halting endorsement, and place the possibilities of “pork-pie” logic beside the “exactly two-thirds nonsense” and

sweeping denial of homœopathic truths by Prof. Cathell; and with the other trivial objections urged by ignorance and zeal against such a self-evident truth of nature, there let them remain, to mark the path where scientific advance has ever found her most serious obstruction—the intolerance of established customs.

CHAPTER IV.

WRITERS have attempted to explain the changes which the last hundred years have wrought in the treatment of disease by asserting that a more minute knowledge of pathological anatomy, and the cause and nature of many diseases, has proven and more clearly defined the narrow field for treatment, by determining many maladies to be beyond the reach of remedial action. This belief is the outgrowth of experience in treatment, where the theories of cure are founded upon exactness in pathological, rather than pharmacological, knowledge; where the treatment is based upon the supposed anatomical changes, rather than upon the symptoms as presented by nature, and is given by the pathologist rather than the therapist. Taught by “authority” and experience, he looks for signs of

organic change, and then bases his prescription upon them. If they are not well defined, his treatment is upon general principles, while awaiting their more decided development; and if the advance has been beyond a certain point, his remedies fail him and he pronounces the case hopeless. Admitting that anatomical conditions as found *post mortem* could not have been changed by any treatment known, is to come far short of *proving* that the primary changes leading to such conditions were not under remedial control. Functional derangement preceded the anatomical changes in a large majority of the cases, *and while such were under the control of remedies*; but the tendency of the professional mind, imbued with the idea that the physician's greatest duty is in making the brilliant diagnosis and prognosis, too often overlooks the earlier symptoms leading to such changes, and thus loses the only time for curative treatment; while the public mind, taught in the same principles, rests secure in the same delusions, since the "trivial symptoms" do not seem worthy of attention. That the necessary skill for detecting and defining these graver conditions when developed is less than that needed for recognition and treatment of the earlier symptoms, is proven by the excess in num-

bers of those so skilled : and until the *symptoms*, rather than the *signs*, of disease are made the basis for prescriptions, such must continue to be the case. No departure from health can occur but such change is made known by the symptoms of functional derangement, preceding anatomical change. Bright's disease is preceded by irritation and congestion of the kidney, consumption by local and general symptoms pointing to it ; disease of the heart by functional disturbance ; apoplexy and paralysis by symptoms of exhaustion, or change in the blood-vessels or the blood itself ; pneumonia follows congestion, and specific diseases the absorption of the disease germ. All of these, and so through all the list, can often be controlled or prevented, when early recognized ; and such prevention is dependent, not upon a diagnosis based upon organic change, but upon an early recognition of the peculiar *symptoms*,—for however much the general symptoms of disease may resemble each other, all maladies have some symptoms peculiar to themselves, and skill here, as in all other departments, is dependent upon familiarity with the subject, and from the pathological standpoint of treatment the symptoms have long occupied second place, and men have grown more skilled in diagnosis than treatment ; and how-

ever much we admire and emulate such ability, the need of skill in *curing* is greater in importance than the skill in determining pathological changes; and so duty should determine us to the system of study which promises best results for human needs.

Extended research into the gross pathological changes wrought by disease is of itself no guide to treatment of such conditions, unless a like knowledge is had of the early changes and the accompanying symptoms leading to such conditions: nor would this knowledge be complete unless supplemented by as thorough a knowledge of the primary and secondary action of medicines: for it is far from scientific to claim that the utmost has been reached in the realm of cure, when the full extent of drug action has not been studied, however perfect pathological science may be. The "text-books" upon general and special morbid anatomy and pathology, and on the self-limited nature of many diseases, have far outgrown in number and in evidence of research the volumes devoted to the study of drug action and their influences upon the human system; while many efforts have been made to determine and define such action by experiments upon the lower animals, and from such results determine the therapeutic value of medicines.

However perfect such researches may have been, they of necessity fall far short of determining anything more than the poisonous properties of the drugs so tested; for although the anatomical structures of man and the lower animals are much alike, the results of such experiments can at best have but a comparative value—since the anatomical and physiological relation of the two organizations is but *comparative*, and in natural history is so recognized—yet “medical science” boasts of the skill and knowledge so acquired and applies it to the treatment of disease in the *human family*. The action of the mind in determining the results of such investigations had no place in the subject upon whom the drug was tried, and its whole action was determined by observation alone, to be later followed by the account of the gross *post mortem* changes. How worse than useless to expect to find here those indications for the treatment of disease, when the very language of its action upon the soulless brute was but one of suffering, terminating in death,—and a dissection to learn its cause,—a truthful travesty upon much of the recorded treatment of disease!

As “the proper study of mankind is man,” so manifestly the proper organization upon which to study the full and accurate influences of drug action

is man when in perfect health, if we would know the natural action of the remedies we prescribe; nor is sacrifice of human life now necessary for the attainment of such knowledge, as some writers seem to fear, for every substance of poisonous nature, used in the treatment of disease, has already proven itself a poison by having destroyed life, and the history of such accidental or intentional—suicidal—poisonings are carefully recorded, while the accumulated literature of the profession affords abundant material for the study of the lesser symptoms. In drugs of unknown action it does not become necessary to destroy human life for proving their therapeutic value, since their use in the treatment of disease is designed to *save life*, rather than produce death,—while a resort to the ordinary experiments upon the lower animals would complete the history of the drug's action, and determine how it kills, not how it cures.

As disease is an abnormal condition, so must the remedy with which we meet it have within itself a corresponding power or fail, for as disease is engrafted upon health, so must the counterforce, if curative, be other than health itself, if it meet and control the disease; and as the natural language, through symptoms, points to the functions

or organs disturbed, so must the natural language of drug action point to the remedy capable of acting *within* the disordered structure, if the curative action be direct and positive.

If, as our authorities teach, the person in a diseased condition is the only fit subject upon which to test the curative or therapeutic substance, and the records of cures alone be taken as the *proof of its value*, in what light shall we look at the failures, or what becomes of its action if not all utilized in the combination with disease germ or its product? If the remedy was not adapted to the morbid condition, its action would be detrimental or poisonous, and its own peculiar symptoms added to those of the disease, and its disturbance of the vital force to that produced by the morbid action. In accordance with the same law of natural action, any excess of medicine can but act as a disturbing element, however well adapted to the malady itself; or else it must be claimed that an *entire change of action* occurs when the remedy is brought into contact with the conditions of disease, than would occur if given alone. If such claim be urged and sustained, then it becomes evident that our physiological knowledge of drugs is of no avail in the treatment of disease, since the action in disease is not the *nat-*

ural expression of the medicine; and we are thus driven back to blind empiricism alone—if the power of the drug over the human system is no key to its therapeutic value. Of what avail, other than to intelligently apply the antidote in cases of poisoning, is the accumulated knowledge of drug action, and the continued search in such direction, if it be not admitted that a *relationship does exist* between the *disease* and the *action* of the drug which cured it? If a relationship does exist, then the evident *symptoms* of the *disease*, and the *natural action* of the *drug*, must have *corresponded* or *run parallel* before administration, since both were *from disturbance* of the same *set of functions* or *organs*, and thus the symptoms of the disease find their *similar* in the drug having affinity for the same organs or functions as itself.

If *this* be denied, then the only alternative left is this, that we study the physiological action of drugs, that we may learn of their potent properties for evil, and then, when called upon to prescribe them, turn from such knowledge of their action, and having no other way, blindly administer them in disease *until their curative place is found* in nature's plan. This is far from scientific, but is in perfect keeping with the early practice of the art, and as

long as followed will necessitate an endless round of experiments, since no one can be sure he has ever given or found the best remedy for any disease, as there would be *no rule to judge its fitness by, other than experience alone*, if the *law of similars* be denied, with the value of proving medicines before determining their place in the treatment of disease.

The fractional dose often disagreeing, or causing an aggravation of symptoms, becomes *proof* that the action of the remedy is beyond that required for therapeutical effect, and that drug action is being added to the symptoms previously existing; but to detect such action one must be equally familiar with the symptoms of the disease and those produced by the drug upon the same organization. A knowledge of drug action upon the human system is the supplement to a knowledge of the symptomatology of its diseases; and with such a manifest relation existing it becomes as unscientific to propose the treatment of a disease with some remedy of unproven action, as to prescribe the best-known remedy for some disease of whose nature we know nothing. A knowledge of the common physiological action of any remedy is not a complete knowledge of its therapeutic value, any more than a knowledge of pathology is a complete

acquaintance with the clinical history and symptoms leading to such changes. As the history before death is needed to make plain the conditions found *post mortem*, so a history of the primary action of the drug is essential to make its full value known, however perfect the tests upon animals may have been. As the pathological change is evidence of the nature of the morbid cause producing it, so is the poisonous action of the drug proof of the kind of tissue or function it has an affinity for ; and as the *symptoms* of the disease are *followed* by certain changes found *post mortem*, so are the *post mortem* changes found to have been wrought by poisons, *preceded* by certain *symptoms* ; and when the symptoms are *alike* in both cases it follows, as both *post mortem* examinations prove, that the same organs were disturbed in either case ; and since the action of the drug and the action of the disease are upon the same organ or function, and that such actions produce changes and symptoms of like characteristics, it follows, as an inevitable result, that *diseases have their similars among the list of medicines.*

If a cure can result from the application of such rule, it is because of nature's endorsement, from being in accordance with her laws ; and if true in one case, of necessity true in all cases where the require-

ments of the rule are met; and since the opponents of homœopathy agree in that "the law of similars was known to Hippocrates," and is true in *some cases*, it will doubtless prove true in many cases if carefully observed, since *success in some cases elevates it to a law of healing*. In the established practice of our profession, if a substance is found to have remedial value a theory of its mode of cure is at once devised, and the substance is at once classed among the remedies believed to be curative over certain conditions: then long years of experience are needed to finally prove its value. Meantime the slow accumulation of a knowledge of its physiological action ultimately proves what its sphere of action is, and thus gives it final place in the remedial list. This, in outline, is the history of almost every medicine known; design placed it in the treatment of disease, and chance governed the course it must follow in proving its value as a remedy; nor has the system undergone any change in its methods of research. Every one has full liberty to put forth his "new remedy," and the profession is asked to *try it in disease*, since experiments are still the order, and no better system is yet endorsed by the "regular" profession, who deny the claims of homœopathy and its principles. That a parallel action exists be-

tween the remedy and the disease it cures, before combination, none can doubt, and such action or production of similar symptoms becomes proof that both disease and drug have affinity for similar organs or tissues, and produce corresponding changes in their structure or function. Unless such is the case, the symptoms of disease and the physiological action of drugs both fail to *prove* where their sphere of action is, or what portion of the body they affect ; and in such case all symptoms of disease fail to be a guide in diagnosis, and all knowledge of drug action of no avail in practice, and all diseases must be cured by indirect or sympathetic means alone ; since, the above-named conditions denied, there remains no *guide* to the seat of the malady, and no *certainty* of the drug action reaching it when given. *By inductive reasoning alone*, Newton could never have presupposed such a force as the attraction of gravitation existed ; he must needs see the apple *fall*, and from this phenomenon educe the reason why, and so demonstrate the existence of the *law of gravity*. So by inductive reasoning alone no man could have known that the symptoms presented by disease were the exact counterpart of those presented by the remedy *most directly curative*. He must needs *see the cure follow*

such application of the medicine, and from such observation educe its law of action.

This Hahnemann did in repeated cases, and his experience has been supplemented and sustained by almost numberless applications since his time ; *and the first man is yet to come forward and prove that the law has failed him, when he had fulfilled its requirements.*

Denial by those who have never earnestly sought its aid, and by others incompetent to meet its requirements through mental bias or faulty training, can have no logical weight. They must bring the *full records* of their experiments, or the rules of scientific research will debar their evidence as faulty. But few of its opponents have the frankness to preface their objections with the candor of Prof. Brunton : " In what I am about to say, I may be to some extent open to correction, for I can not claim to know his (Hahnemann's) doctrines so thoroughly as those who believe in and follow them."—(Preface to third ed.) With the eminent scientist just quoted the question is not one of denial of the law, but a question of authority as regards its first recognition, and the extent of its application,—an advance surely from the early denials and ignorance of its claims. As it is impossible to employ any medicine which

has within itself the power for producing the *exact opposite or contrary* of the disease symptoms—since such conditions would be one of health, giving no symptoms—it is logically impossible to cure any disease by giving its exact “contraria,” and all the cures so wrought must be of necessity upon general principles or indirect measures alone, and can not become scientific, since there is no governing law or method to direct its course, and hence ceaseless experiment must result, and the system continue to place itself *the one exception to the guidance of natural law in the branches of medical science*. As the disease is a condition engrafted upon that condition which we call health, and is made known by its symptoms pointing to disturbed function or anatomical change, and by such language points to the remedial needs, that system of medication must become most scientific which can most readily utilize such symptoms, as they must be ever present so long as humanity suffers from disease. He who denies the value of the *law of similars*, sees in the symptoms only something to be removed or overcome, by positive attack; while he who follows its teaching finds in the symptoms a guide to the most direct and scientific means of controlling his patient’s suffering.

And thus the Creative Wisdom which gave each disease some peculiar symptoms is found to be in sympathy with the patient's needs, and to point to the source and kind for their control; and that long before a *post mortem* examination has defined the extent of the malady, or human theory devised some plan for its control, in the next case.

From this standpoint a natural order of research presents itself, and having once recognized this law of cure, scientific method takes the place of endless trials, and nature points the way to the most successful system of therapeutics known, rather than the changing theories so long followed. Thus we find by careful search of natural facts substantiated by experience and success, that the choice of the remedy is *most scientifically made*, when most in keeping with the *symptoms* of the disease we *would control*. If but a single case can be authenticated, the *law* would be *proven to exist*, for if a *similar* can once *cure* it is because it has nature's authority, and therefore establishes the *natural fact*; so those who would deny its claim must prove that such cure never followed the giving of a *similar*, and with them rests the burden of the proof.

While advancing the *law of similars* as superior to any other yet known, as a guide to the proper

choice of the curative remedy for any curable disease, and not as the *exclusive dogma* of any school, as some of its opponents would seem to make it, we can but believe that the success of the older system of practice divides itself into two broad classes: one in which the cure followed general and indirect principles of action, and to that extent is unscientific; and the other class to the "unconscious following" of the law of *similars* under most faulty conditions; for, independent of the *theory* upon which the drug was given, its action must ever be in conformity to natural requirements, and from such practice has arisen those remedies called "specifics"—their specific value proportioned to their similarity of action when compared to the symptoms they control. Upon the other hand, if "homœopathic success" is dependent, as some claim, upon "the restorative power of nature," then such restorative power has had most unfair treatment in older hands; and homœopathic success becomes the proof that nature is more competent to cure the patient than is established medicine, where such "power" is ignored.

CHAPTER V.

IT now becomes necessary to examine the relations existing between the action of the vital force, and the effects produced by remedies, in their practical relations, and to so demonstrate, if possible, the evident want of scientific method generally found to accompany such explanations; and by so doing to show the intimate connection existing between the *law of similars* and the other laws of our being. While in keeping with the general object of this work, viz., to discover wherein homœopathy has the endorsement of natural science, this part of my argument has no previous relation to the teachings of either side of the question, but is the result of individual examination into the laws of organization and disintegration, as regards their connection with the science of healing, and as such is with some diffidence advanced.

With a disposition to group events and facts under the fewest possible rules, men have ever tried to satisfactorily explain the varied phenomena of diseases and their cures, under narrow or dogmatic rules, oftentimes regardless of the violence done the facts so treated, while bending them to their preconceived theories. There is all about us constant

evidence that every organized body, be it animal or vegetable, is under the action of a force or law ever shaping its growth and formation ; and while it exists as an individual entity holding it in perfect being,—unless disturbed or thwarted in its action by some force exterior to itself. This inherent law of growth and maintenance has been defined as the vital principle, the formative law, and by the early writers was called the *vis medicatrix naturæ*—or the inherent healing principle of all organized bodies, both animal and vegetable. Like all natural forces its *existence* was made known by its *effects*, and its phenomena through all time ; and all nature ever proving the same, places it within the category of natural facts, always capable of demonstration. Then so far as the art of healing is found to fall under the domain of such law, its sphere is fixed and it takes its place within the domain of natural science. Of the range and action of this force or the *vis medicatrix naturæ* we will now examine, and by so doing see how far the early claim of its formulators holds good, and what place it yet has in determining the medical beliefs of our time.

When diseases result in recovery without the remedial action of drugs, the process is said to have taken place owing to the vital force being

stronger than was the disease acting against it, and by this inherent strength to have "thrown it off;" and the *vis medicatrix naturæ* is thus credited with a certain amount of force or power for taking all care of the body up to a certain point. Again, had the disease proved fatal it would have been said that the vital force could not withstand the force of the disease, and by its yielding death occurred: had remedies been given and recovery followed, it would have been claimed that they assisted the *vis medicatrix naturæ* in its efforts against the disease, while had death followed their administration it would have been urged that the malady was stronger than vital force and remedy combined. Whenever hypertrophy of a part occurred it was explained as being the result of *over-action* on the part of the *vis medicatrix naturæ*. Here then we see the theoretical personification of this force; and the theory which explains the cure or failure is molded by the theorist's conception of such a force or power, and as a natural result we further find his attempts at treatment all in accordance with such theory. Free use is made of cathartics, expectorants, diuretics and other excitants of the several functions of the body, in his desire to "aid the efforts of nature," and to-day, despite the boasted improve-

ment in the treatment of disease, such views yet hold their honored place, and physician and patient alike look to nature to aid *their* efforts regardless of the remedies employed, as though her laws would bend to the changing plans of treatment used. In the first explanation given of a cure resulting from natural action alone, it is presumed, in the explanation usually given, that the *vis medicatrix naturæ* was in that case able to reach to a certain point beyond its own domain of growth and repair of the body, and so extend a certain amount of force into the way of the disease, and by such action thwart or control it ; thus proving itself able to take all care of the body up to a certain point, beyond which aid would be required. Where death occurred the vital force was said to have been over-reached in its extent of action, and by such power upon part of the disease to have defeated its efforts at restoration. Where remedies were used and recovery followed, it was explained that they assisted nature and so led to recovery. Where death followed the treatment it was held that the malady was too strong for the remedy and the vital force combined, and hence the treatment failed. Thus the theory based upon the results endorses the treatment in either case, believing recovery to have resulted from

its use in the first, and failure in the second case to have been owing to the severity of the disease being such as to defeat treatment and nature combined, either because no remedy was known for such condition, or enough for control of the symptoms could not be given, owing to fear of its *poisonous action*,—this fear proving, that beyond a certain point in the treatment of diseases nature has to *contend with the danger of disease and treatment combined*; thus inverting the usual order, where nature is said to combine with the remedy against the disease. Since men dare not now argue that they can cure disease when acting against the natural laws of growth and repair, as was once done by bleeding and “starving the disease,” they now adjust their theories to a seeming harmony with natural requirements, and so charge her with lack of force when they fail, and credit her with having aided their efforts when they succeed,—while the impartial observer can but think that as nature’s operations ever conform to established law and harmony, theirs do not. To him who looks for natural evidence of authority in these theories of diseases and their cures, and applies the inexorable laws of scientific test, there must come a growing element of doubt. It can hardly be argued that nature, so exacting in all

other departments, here proves an exception, and thus allows her forces to adapt themselves to the changing requirements of a developing science. The skepticism so awakened must find more fixed basis upon which to rest its weakening faith in the "science of cure," and that science will become incontestable in just so far as its claims have the endorsement of unchanging law.

All phenomena of disease are produced by change in texture or function of the part affected; and so far as absolutely known the exciting cause is from without the body. In the class of germ diseases, now known to be much larger than once supposed, this fact becomes self-evident; as does also the fact that the causes, *bacteria*, and *specific germ*, are taken into the system by the breath, food, drinks, and by inoculation and infection. In the class beginning as functional, and ending in anatomical change, external and emotional causes are nearly always the source, and are thus foreign to the bodies they disturb. Entozoa and cutaneous affections fall most readily into this order; while finally malignant growths are by our most advanced pathologists believed to have their exciting cause in a traumatism, or some local irritation. Affections of an inherited type need the external exciting

cause to develop the disease, for a weakness or tendency only can be inherited. Where infants are found suffering from birth with the same disease as the mother, the cause is through direct infection, and does not come under the head of inherited disease.

Thus by far the weight of evidence is in accordance with our claim, that *diseases have their exciting cause from outside the organism they affect*, and are thus by the very nature of their origin independent of the action of the *vis medicatrix naturæ*.

Such being the case, we must naturally look for the elements of remedial control also away from the body affected, for as the vital force can advance nothing but a tendency—the *vis medicatrix naturæ*—to cure or restoration, with which to combat the disease, the positive element of control must come from outside its domain of action, as did the disease itself. All symptoms being the result of change in function or structure, they become the language by which nature makes such changes known; the more pathognomonic, pointing directly to the organ or structure disturbed, and in which remedial force is required. That her wants may be unmistakable, nature stamps upon the symptoms of acute character the need of remedy quick and powerful

in its action ; while slow decline and gradual wasting prove the need of more prolonged control, and constructive or proximate principle.

Here, then, we see the evidence of a controlling power in the realm of disease as fixed in its operations as is the action of the vital force within the realm of growth and repair ; and that the two conditions are opposed to each other, and independent of each other, in their respective spheres of action. When disturbed they both exercise the same disposition to return to a state of equilibrium or rest, as do the other forces of nature. The tendency of the vital force is to return to health, its normal condition ; the action of the other is to destroy such condition, and if left alone in their operations the one having for the time the most power will triumph. The vital force being always limited in its power and range of action, while the other is not, since the tendency to disorganization is always engrafted upon all organized bodies, the aid to the vital force must come from without the normal realm of either force ; and such aid must be in perfect keeping with the requirements of vital processes, for health is reached not by increase of vitality, but by cessation or control of the diseased process. The well-organized action of the vital force can withstand

the action of the disease or impinging force up to a certain point, and then, unless the morbid action is stayed in its course by accident or the design of man, must yield ; for as destruction of animal life is one of nature's provisions, a fatal termination of disease is no exception to her rules, *and this fact becomes an indication to men to so shape their treatment as not to assist this tendency to destruction of the life principle.* As it is "as natural to die as to be born," it is as easy to disturb as to aid the vital force in its conflict with disease. Recognizing then the action of a natural force or law, antagonistic to the vital force,—as easy of recognition by its effects as is the former, it becomes necessary to study its phenomena, since the treatment of all diseases will be found to conform more to its operations than to the action of the *vis medicatrix naturæ*, so long regarded as "the basis of all therapeutic operations."

No explanation of the phenomena of cure can be philosophical which recognizes but the one force doing *double duty*, first, as the force governing the processes of construction or growth and repair, and when *later* needed, acting as the opponent of a force exterior to its domain of action, and so becoming the successful element in control of dis-

ease; for the *elements* concerned in the *two processes* are *antagonistic* in their nature, and from *opposite* sources in the domain of nature, and the power which *molds* the one into *organized bodies* can not in reason be said to have any control over the other. This evident fact has necessitated the theory that the vital force has a certain amount of reserve power which can be called into action at the onset of disease, and thus lead to recovery: but the explanation of such action pre-supposes the extreme range of action attributed to the vital principle by its early formulators, and yet remains but one of the early theories needed to reconcile the plans of practice with the phenomena observed. Its want of logical worth becomes evident when it is remembered that the fever germ, the specific virus, and the poisonous element, when introduced into the blood, all exercise their natural action independent of the vital force, and that if they prove independent of the excretory functions of the body, they will make their presence known by their continued action, unless controlled by some remedy other than the "reserve force" of vitalized bodies; and if this force fails in the onset how expect it to prove more potent later? It is also claimed that recovery of animals, without the aid of medicine,

proves that the vital force is the opposing force or principle of the disease, and that such recovery demonstrates the control of vitality over disease ; but this reasoning loses its weight when the animal dies, and necessitates a change of theory making the disease of such severity as to overwhelm the vital action, at best making the claim of but partial application, and still proving the vital principles subordinate to a force it cannot control, and so requiring external aid, and that of other than vital principle. When carefully examined all conditions of disease will be seen to be a process in which *two forces* are striving for mastery, health the result upon one hand, and death upon the other, and such *conditions* become *evidence* of the conflicting forces at work ; and since the physician's desire is to promote recovery, his action must ever be against the disease, and in conformity to the requirements of the vital force. Should the above statement need stronger proof, it is found in the fact that when a *third force*, the *action of a remedy*, is brought to bear against the disease, recovery occurs ; while should the disease element be increased, failure of the vital power results, both of these actions being independent of the *vis medicatrix naturæ*, and outside of its domain of action.

In many diseases it is found, after recovery to a certain extent, that hypertrophy of the part has occurred: and as often as found is explained by saying that it is the result of *over-action* on part of the formative process, which by such action produced a *diseased* condition; that the condition is abnormal is evident from the departure from a natural state and from the secondary conditions following it; and yet the *cause* of it is as usual attributed to the action of the *vis medicatrix naturæ*, and thus this mysterious force is made of such extreme flexibility as to first prove a constructive agency, next an opponent of disease, and lastly by its excessive action to constitute a disease itself, causing hypertrophy of the part affected. That growth or development of many parts of the body to a certain point is dependent upon use or action is well known, but when in excess of natural bounds it is because of some irritation other than normal use or health, and again refers us back into the domain of diseased conditions.

This conflict of opinions, and explanations of so conflicting a nature, arise from the evident fact of having attributed to the action of *one natural law*—that controlling the processes of growth and nutrition or repair—the phenomena of its *opponent law*

or principle, having control of the processes of disease and disintegration of bodies so organized ; and hence the theoretical explanations must adjust themselves to the opposite requirements. No explanation of the phenomena of disease and recovery can be invincible which is based upon other laws than those having control of the natural processes as proven by their effects, for like all laws of nature we *know* of their *existence* from their *effects alone*. The vital and abnormal conditions are neither in the solids, liquids, or chemical changes alone, but as *all* these formations have to do with our *being*, so with our *diseases* and their *cures*, and their correlation of action makes it impossible that one can be disturbed and the others remain normal, or that theories based upon the one or the other can prove true to nature.

When a poison has been administered in sufficient quantity to destroy life, the *vis medicatrix naturæ* stands helplessly by, appalled, as it were, by the force arrayed against it, and thus proves of no avail to the unfortunate who has taken the dose, from its having *no control* over the *action* of the *drug*. The timely administration of the antidote is the only possible way back to health, if the drug was of deadly nature. Here then is a process

wrought foreign to the vital force and independent of its control; a meeting in the system of two opposing forces, either of which alone would destroy life, but when opposed to each other they leave the system unimpaired. Should the poison be one which can not be met by a direct antidote, the strife is like that of disease, and death or recovery will depend upon the *quantity* of the disturbing element, for nature can present, through vitality alone, the tendency to recovery only, while the drug works its *full effect* despite all tendency to restoration after its effect has passed. In the same manner we find the condition of health disturbed by foreign germ or faulty condition of the functions, and the vital force equally helpless against their action, from having no force or element with which to meet the attack, while the tendency to health can not neutralize the extra element introduced into the economy, and the symptoms of disease become the cry for aid. This aid must come from a source and in such manner as to allow it to meet the opposing element within its own sphere of action, rather than in conformity to the vital force; for the vital power is as helpless before the remedy as before the disease germ, and the normal action must come through the remedy controlling the

diseased condition, and leaving the vitality unimpaired.

Again, the remedy must have within itself the same power for disturbing the general health as has the morbid action, if it be equal to controlling such action, for the vital force can offer no controlling element itself, and must await the disease's control before its power of restoration becomes manifest. To meet these requirements it is evident that the remedy itself must come, as did the disease germ, from a realm of nature foreign to that from which the vital principle draws its supplies; in short, that in the realm of poisons or among the destructive agencies of our being are to be found the elements for controlling the other disease-producing principles which prey upon the vital force.

In conditions of disease where there has been irreparable anatomical change we again meet the same fact confronting our efforts: unless the remedy can meet the conditions produced by disease, by covering in its own action the changes wrought by disease, it can not prove *curative*, and where the structural change is such as to defeat the action of the *vis medicatrix naturæ* we have no power by which to apply a direct aid to her efforts. There is no drug known, having within itself the

power of directly controlling the growth of a single part; so there is no way known for thus affording direct aid to the vital force, when such force has reached its own limit—again proving that in the treatment of disease we do not directly aid the vital force, but with our remedies defeat the forces arrayed against it; and that our skill in such action is always proportioned to our being able to most closely meet the indications offered by the symptoms of the malady we are combating, by advancing a remedy of *similar* disease-producing power, when used alone.

CHAPTER VI.

AS the normal law of growth and maintenance, or the *vis medicatrix natural*, is inherent in the product of its own formation, ever giving it form and texture; so, in accordance with all natural laws, must we look for its antagonistic force or law, acting against the same structure or body in constant opposition to the first; and bringing, as does the vital force, the elements with which it acts from without the body. As nature has provided the elements for growth and repair, so she has also created the germs of disease and decay; and in

accordance with all her works, separate bounds of action and laws of control have been devised by Creative Power for their operation, and man's duty is to discover the action and bounds of such laws. Both laws becoming manifest in the conditions which they create, a study of such conditions becomes the only source of information relating to them, and that such information may be accurate confusion of facts should not be allowed to govern our conclusions.

The action of the one never reaches over and does duty for the other; since the *product* of *disease* is *not life*, it is equally impossible that the *product* of the *vital principle* can ever be *disease*. If disease can ever be said to "be the result of increased vital action,"—then it can *frequently* be; for if it is granted that any phenomenon is of natural origin, then it becomes evident that nature is always capable of inducing such changes,—nay, more, must do so as often as the conditions become favorable; and hence that all her operations are thus dependent upon *chance conditions*. From what source can the vital force draw material to make its own action *over-perfect*, so as to constitute a diseased condition? If "local inflammation" be claimed as an evidence of disease from increased vital action, it must

be admitted by all that its *product* is *abnormal* and the proof of a diseased condition, by which health is at once disturbed. If we judge all natural laws by the phenomena they induce, then how attribute morbid action, and its results, to the law of health?

The vital principle has reached its full extent of action when a condition of perfect growth and health is established, and the smallest departure from such condition is evidence that another element or force is impinging upon its perfect working; and to such force the treatment must ever be directed. Vital conditions are not the product of abnormal action, nor can they be: for were the vital or formative process not *fixed* by nature in its sphere of operations, what *blights* of form and type must occur in nature's plan! Its power being continued, and its action uncontrolled, discord only could attend its results. As the law of disease is ever perfect in producing its *types* of morbid action or conditions, so is the vital force when left undisturbed by other forces; and as these two conditions are ever perfect in their respective orders, so will be the laws of cure when our art has become a science.

The application of medicine to the cure of disease can not be logically or successfully given at

one time to "aid the efforts of nature," and a little later to thwart the operation of the *same law*. To be scientific the laws of therapeutics must be rational, and if rational, not in opposition to natural requirement, by observance of some theoretical maxim now plainly untenable. Biased research, empirical practice, and faulty observation, based upon natural facts but soon perverted by theory and fancied results, have all served to develop the one outstanding fact, that back of all dogma, through all the ages, there has been this one element or law, refusing to be governed by any rules known, and often thwarting success, when it *seemed* to promise the efforts made to aid the action of the vital force, by making its own action suddenly manifest,—and such failure was charged to irregular or perverted action of the *vis medicatrix naturæ*. Parallel with the vital force this element has been found to run, and whenever its action has been partially recognized its power has been attributed to the other force. Various theories have been devised to account for its workings, but all bending to the one idea of the wide range of action of the *vis medicatrix naturæ*. Men failed then as now to recognize that as medical science is based in all its actions upon the products of natural formation, it

must obey the laws of nature in every detail if perfect ; and as every known natural law has its well-known antagonistic law or force, thus holding the whole realm of nature in equilibrium, so there must exist an *opposite to the vital force*, and to *its working* we must *conform our therapeutics*—if we ever displace *experiments* with *scientific certainty*. While men have ever recognized disease as the enemy of life, as proven by all human experience, they have failed to recognize that it is under as fixed laws of action as is the life principle, and have thus continued to mold their treatment of disease to a mixed operation of the two forces. Formulæ are dangerous to scientific reasoning, and tend to dogma or theory ; and hence, in giving phraseology to the idea I would now convey, I also invite the danger I would argue against : still if a thought will not formulate itself into words, it is from being intangible, so I venture to give my thoughts in the following form :

The destructive agencies of our being are coexistent with the laws of our formation, and are made manifest by disease and death, their natural product. The controlling elements of such conditions are also coexistent with our growth and being, and are found in the same natural realm as is the dis-

ease germ ; both being outside the domain governed by the vital force, as they are primarily outside the body they disturb, and both are antagonistic to vital action when acting alone.

The exciting cause of disease being external to the body affected, and thus foreign to the vital force, must be sought for outside the realm from which the vital principle draws its material for construction, and within that governed by the opposite force or law ; and within this same realm must we also seek the controlling remedies, for since both are equally destructive to vital products they must belong to the same department of nature. As the vital force has no power for causing disease, so it has no substance peculiar to itself for curing it ; and thus we find the *vis medicatrix naturæ* to be the controlling force or law in the realm of our natural conditions of growth and maintenance, and that another law of nature must prevail where disease has development ; and that law I will venture to formulate as the *vis morbifera naturæ*, or the natural law of diseased conditions, having control of the morbidic germ and its process of action as has the other of constructive elements and growth ; and with which we have to do in the treatment of disease. The vital force is ever able to care for the

needs of the body under common conditions if disease be kept away, until the lamp of life, from age alone, goes out.

The practical advantages accruing from recognition of this law and its relations are found in the fact, that it places the treatment of disease upon the same natural basis as in the growth and repair of the body. As the vital principle controls all processes of growth and nutrition, so the morbid force controls all processes of disease and decay, and over all the systems of medicine yet devised, points to the realm from which the disease originates and in which the remedies must be found for its control. It does away with the necessity for making the vital principle do duty in a supposed *three-fold manner*; first as the constructive element of nature, then the controlling principle of disease, and lastly the cause of morbid action itself, and by so doing places a natural limit upon the well defined field of vital action. By confining the power of the *vis medicatrix naturæ* to its well-marked sphere of action, the true domain of diseased action becomes more sharply outlined, and its controlling law more evident; and as such points to the remedial needs of the system upon the one hand, through the symptoms of the disease, and upon the other

hand to the source and nature of the controlling element or drug, through its disease-producing power.

In perfect keeping with the action of such law, the whole *Materia Medica* divides itself into two distinct divisions, the one class having power over symptoms or functions alone, the other class having control over organic or tissue change ; thus proving itself in harmony with that other department of its domain, or the production of all forms of disease under the two orders of functional and organic, these being acute or chronic in their nature, as are remedies quick or slow in their action, and thus it is seen that *each type or order of disease has its counterpart in the range of drug action.*

He who thoroughly comprehends the full range of drug action in its close relation to diseased conditions comes best equipped to the treatment of such disease, and he who most intelligently regards the *laws* under which these actions occur, will first prove superior to the theories by which the profession has long been hampered. The authority of the past is experimental knowledge, and its result is a condition of mind inclined to give nature too little place in the operations of her elements, by claiming that since recovery has

followed the giving of "contraries" the treatment and its system have proven accurate. If the remedy *was curative*, then by *direct* or *indirect* means; if direct, then through its power of acting directly upon the part affected, and in that proportion capable of inducing a *similar set of symptoms*. If indirect, then the cure was wrought by general means alone through reflex or sympathetic action, and thus falls far short of the certainty of "specific" or direct treatment. We have seen that, judged from the standard works on treatment, and the evidence of historical medicine, the rise and growth of therapeutics has been the subject of constant theory, and changing plans of practice. That new systems arose as often as some new discovery proved the older theory false to nature, and detrimental to success. While always having the cure of disease as its object, constant change of views characterized its growth, and as anatomical truths became more advanced, the treatment of disease become more rational; and as these anatomical structures taught an absolute *law* of growth and formation, so men began to look for something more positive in its operation than human theories. No age in the history of therapeutics was so replete with changing views and theories of cure as was

that which saw the final discoveries in anatomy, and the rapid advance into physiological truths. The first great era was then completed; anatomy had become a well-known branch, physiology had demonstrated the action of natural law governing the operations of organized bodies, and the great foundation work of medical science was fully recognized. Amid the broken fragments of rejected theories, and the visionary ideas of the age, those whose labors had finally completed the basis structure were found searching for some key or plan upon which to build the walls of this temple of the ages. Their advance had proven all the older theories of cure deficient, and despite the now boasted claim that Hippocrates determined the "true system" of cure for all time, men were then searching for some one dogma or rule for controlling all remedial measures. Some in chemical affinity sought its source, others in numerical proportion, others again in nervous influence; and still others in the actions of the liquids or the solids of the body, and the broad types of disease, thought to find the priceless truth, which then as now evaded mortal grasp, if sought under other conditions than nature imposes. This was the condition of medical practice when Hahnemann made his discovery, and soon after put it

before the profession, handicapped with the theories of the age, and conclusions of his own; but amid his "doctrines" there existed a *positive force* that has continued to make itself felt to the present time, while humeralism, solidism, vitalism, and nervous influences have all been gradually displaced by what its followers now term "rational medicine"—still operating in accordance with the rules which gave the others birth. Either those who follow the principles he advanced are a century behind the present time, or else his teaching, cumbered as it was, was a century in advance of his time, for to-day, side by side with "rational practice," its records of cures are as good at least, and the dominant practice is slowly indorsing its principles. The order of growth which of necessity had characterized the development of medical practice was dependent upon anatomical knowledge, and in keeping with such fact grew the idea that having found anatomy fixed in its relations, as were also the changes wrought by disease, there must be some rule having its basis in the organic changes they found which would prove the infallible key to the remedy they must use to prevent or cure such conditions, and all their operations were ever in conformity to the idea that they must produce an

opposite set of symptoms and effects than were those caused by the disease, if they would cure ; and thus we find all their efforts and their reasoning based upon anatomical and pathological conditions, and a knowledge of drug action made of secondary importance in their search. They failed to discover that the vital or formative principle must have its own well-defined field of activity in nature's plan, and that there must also exist an antagonistic or equalizing force ; they confounded, as is still done, the action of the one with the effects of the other, and failing to see that nature taught that in *all conditions of disease two opposing forces* are ever at work, rather than some individual entity in the blood, or taint of constitutional nature ; and that all treatment having curative value must conform to the operation of these forces,—that we can not at one time aid the vital force, and the next control or thwart its action ; that to make the treatment of disease rational it must accord with the requirements of nature ; and that as one natural law can not be made to do duty for another, so any and all systems of cure will prove deficient which fail to recognize the natural requirements under which they operate.

Theoretical conclusions have ever proven faulty,

except based upon natural facts, and when so found to exist they cease to be theories and become laws. As nature gave us being, she has ever controlled our existence, and as her laws are immutable, so is the condition under which we exist unchangeable : health and disease are the opposite conditions of our being, and as such are under opposing laws and requirements. As the two conditions can not co-exist, so are the laws which govern them found to oppose each other ; and as the sick one's return to health must be through diseased conditions, so must our efforts to replace him within the domain of restoration be through controlling the action of the *vis morbifera naturæ*.

In conformity to such requirements we must ever find the surest remedy possible for the disease, by finding that substance which has the most power for exactly and speedily controlling its symptoms, and this substance will ever prove its inherent value, by causing a *similar disturbance of health* when brought alone into contact with the vital force.

Now having demonstrated, to some extent at least, that natural laws underlie the *science of therapeutics*, and upon which it must finally rest for permanence, it remains to find wherein these laws are in conformity to the modern practice of medicine,

and which "system" has most inherent claim to such support. That the conclusions to which this examination has guided us may be at once discerned, I will briefly recapitulate them in the several following propositions, trusting that those who may be interested in the truths they represent will neither accept nor reject them, before examining the reasons which have led to them.

RECAPITULATION.

PROPOSITION I.

The science of therapeutics was dependent for its basis upon an accurate knowledge of the science of anatomy and physiology; and until such knowledge was perfected was of necessity subject to change and theory.

PROPOSITION II.

The value of any remedy is dependent upon its affinity for, or natural action over, the function or organ disturbed; and this knowledge is obtainable only through a study of such action when the organs and functions are uninfluenced by disease.

PROPOSITION III.

The relationship existing between the remedy

and the disease over which it will prove curative is made known by a similarity of symptoms; these symptoms resulting from the remedy and the disease both having affinity for the same tissues, or organs, and producing a like disturbance.

PROPOSITION IV.

The ultimate power for controlling disease, inherent in any drug, is dependent upon its property for destroying the morbid germ, or of promoting recovery by supplying the needed constructive element or proximate principle.

PROPOSITION V.

The *vis medicatrix naturæ* exercises control over all conditions of growth and repair of all organized bodies, and having no control over the elementary substances foreign to such bodies, it becomes powerless against the development and action of morbid germs and poisons.

PROPOSITION VI.

The *vis morbifera naturæ* is the controlling law in the domain of morbid conditions and changes, generating the cause and defining its action, and is therefore the opponent of the vital force and inde

pendent of its action both as regards the morbid germ and the controlling remedy.

PROPOSITION VII.

Medical Science is, therefore, rational, only so far as it is based upon *natural science*, and when so fixed is unchangeable, and at once takes its place among the fixed sciences, always capable of demonstration, and in such proportion superior to theory or experimental research.

PART II.

CHAPTER VII.

APPLICATION.

IN making application of these rules, or rather in determining how far they are in keeping with the recorded experience of the profession, it is not our intention to write an exhaustive treatise on *Materia Medica*, but rather to illustrate by a few examples the basis we urge for a rational study of medicine, when applied to disease. By choosing a few of the well-known remedies of the pharmacopœia and putting the physiological action of the drug in contrast with the pathological conditions over which it *has* proved curative,—the relationship between the drug producing, and the drug curing action in the human system will be shown. If this property of the drug can be shown to exist in a general manner, then it will require but a more detailed study of the same to show that the parallel holds good in every detail, and that the *art of prescribing* can be

made to assume a *scientific form*, and the law which governs such action be demonstrated. In so doing we shall not try to defend any dogma or theory, for if it has not nature behind it, it must remain but theory alone.

To make this test scientifically we must put aside the prejudices of early teaching, and our preconceived opinions of dosage and the action of remedies, for no better rule for either can be known or formulated than this,—*that when improvement follows* the giving of a remedy, the dose and its frequency of repetition have both been in accordance with the *natural laws* of healing. We give the remedy for a desired effect, and the exact quantity necessary to produce such effect can not be foretold, neither can the needed frequency of the dose, as both are dependent upon the conditions under which its action is produced, and therefore can have no fixed rule.

In answer to the oft-repeated question of how medicines cure disease, just what their *modus operandi* is,—nothing but *theory alone* can be advanced; and as our search is for *truths capable of natural demonstration*, we can but leave the answer where the theorists have placed it. After the remedy enters the circulation, and there often

escapes our most careful tests for its presence, we can know nothing of its action until it again reappears in the secretions or excretions, and its presence is demonstrated in the system by its effects. Until science has taught us just how the morbid germ acts, what its *modus operandi* is, we must rest content with knowing that effects are and can be wrought by the means nature has provided, but how the *vital force* is influenced in either case we are unable to answer. In this again the science of medicine is in perfect accord with all the phenomena of nature. We know that certain effects will follow the manifold application of natural law, but we know not how. Until we have learned from nature the *order* of her working, we can hardly hope to know just how her effects are produced.

The first drug of which we shall make a brief analysis of its power for *causing* and *controlling* abnormal conditions, is the well-known remedy

ACONITE.

Aconitum Napellus, Monkshood, Wolf Bane, and Blue Rocket,—its active principle being *Aconitia*,—known to the ancients as a powerful and rapid poison; first introduced to professional notice by Baron von Störck, who published his experiences

with the drug in disease, in the year 1762, from which time it has held its place in popular favor.

In Dr. Waring's admirable text-book upon "Practical Therapeutics," is quoted at length the investigations of Dr. Fleming, into the physiological action of aconite, and the summary of such test is the most complete of any with which we are acquainted among the "regular" works upon *Materia Medica* or *Therapeutics*. "Given internally, Dr. Fleming divides its operation into four degrees," and the summary of such operation is as follows :

"First degree. Half an hour after a dose of five minims of his tincture, warmth is felt in the stomach, accompanied by slight nausea and oppression of breathing, followed in about ten minutes by general warmth of the body, numbness, tingling, and a sense of distension of the lips and tongue. There is also a tingling at the tips of the fingers, and a peculiar sensation is felt at the roots of the teeth. These sensations continue more or less from one to three hours. Slight muscular weakness is generally experienced, with indisposition for exertion either mentally or bodily. In about half an hour more the pulse is found diminished in strength, and in another hour both the pulse and

the respiration have become less frequent. Thus, a pulse which in the normal state beats 72 in the minute will by that time have fallen to 64, and the respiration from 18 to 15 or 16.

"Second degree. Should a dose of 10 minims be given at first, or the first dose of 5 minims be succeeded in two hours by another of equal amount, those symptoms supervene more rapidly and with greater severity. The tingling extends along the arms, and the sensibility of the surface is more or less impaired. In an hour and a half the pulse will probably have fallen to about 56 beats in the minute, and become smaller and weaker, still maintaining, however, perfect regularity. Respiration about 13 and laboring; great muscular debility, giddiness, and confusion of sight come on when in the erect posture. A lethargic state ensues, with great disinclination to be disturbed, coldness of the surface, and particularly of the extremities, which are cold to the touch.

"This is the utmost extent to which aconite can be administered with safety and success.

"Third degree. On the administration of 5 minims more two hours subsequent to the last dose, the sense of warmth, tingling, and numbness again spreads rapidly over the body; diminished sensi-

bility of the surface; pains in the joints are complained of, and the vertigo and dimness of vision are increased; the countenance becomes pale and anxious; the voice becomes weak, and there is often a dread of approaching death. The pulse occasionally falls to 40—or even 36, but more generally rises to 70 or 80, small, weak, and irregular. Respiration short, hurried, and irregular, accompanied with sighing; surface moist and cold; vomiting sometimes occurs. The symptoms do not subside for one or two days.

Fourth degree. If the medicine be continued, the countenance becomes pale and sunken, froth issues from the mouth, and the prostration increases; sensations as if sinking from loss of blood; the pulse becomes smaller and weaker, more irregular, with a cold, clammy sweat. Consciousness usually remains. If the action be carried to a fatal extent, the patient becomes entirely blind, deaf, and speechless; the pupils are dilated, slight convulsions ensue, and after a few hurried gasps death by syncope takes place."—*Fleming*.

Of the truthfulness of this word-picture, of the poisonous activity of aconite, so well given by Dr. Fleming, the author of this essay can bear witness. I had under treatment a young man, aged twenty-

one, sick with acute inflammatory rheumatism, a farmer by occupation, and up to that time of robust health. Had decided to place him upon aconite, and at my afternoon call, at 6 P.M., prepared a goblet of medicine containing one drop of *tinct. aconite root* to each teaspoonful of water; told his nurse—an aunt of the patient, as he was ill at the house of an uncle—to give a teaspoonful of the solution every half-hour until 9 P.M., after which to give it in teaspoonful doses every two hours until I saw him in the morning. At my morning call found him very much worse—to all appearances dying; suspected heart complication, but was surprised at the rapid advance it seemed to have made. In listening over the heart found but a very feeble, irregular action, and no roughening or murmurs pointing to such complications. He was at the wrist pulseless, face livid, eyes open and staring, with dilated pupils, chin fallen down, mouth opened wide and its surface dry; apparently deaf to all sounds, body cold and clammy. Thinking of the aconite I had prescribed the evening before, I turned to the table and found much less than I should have done. Asked his aunt if he had taken the medicine through the night; she replied that she had given it as I directed, *every half*.

hour until eight o'clock, when her sister came for the night, and that she told the sister it was being given every half-hour; that he seemed to grow worse during the night, and since 6 A.M. had been unable to swallow. I saw the condition of affairs at once. The aunt had *forgotten* to tell her sister to put the doses *two hours apart* after nine o'clock the evening before, as I had directed, and my patient was in danger from *aconite poisoning*. He had taken twenty-four one-drop doses from 6 P.M. to 6 A.M., and I found him about 9 A.M. Proceeded at once to give him brandy hypodermically until he reacted enough to swallow, when I gave it in small quantities by the mouth every few minutes until perfect reaction and warmth were induced, after two hours' efforts and use of nearly one pint of brandy. After the aunt discovered her mistake, I had no farther fears of an error on *her* part. The patient's convalescence dated from that time, and was rapid and complete. Have never had the courage to try such heroic doses since, and have never had so marked an effect follow the giving of aconite in rheumatism. Have given the history of this accidental poisoning, as it was *apropos* to the subject we are studying; and will now resume the regular order of our examination, by giving the

changes found *post mortem* after poisoning by aconite.

There is perfect uniformity through all the treatises on aconite, as regards its power of destroying life through effects upon the nervous system, and of the little change found *post mortem* in any of the anatomical structures of the body. "The brain," says Taylor, "is found firm and healthy, the vessels in its surface filled with blood. The heart healthy, or flaccid, the right side distended with dark fluid blood, the left side contracted and quite empty. The lungs healthy. The viscera of the abdomen healthy with the very uniform exception of local congestion of the lower end of the stomach and duodenum."—So far as I can now determine, death had resulted from the poison having been *swallowed*, and may not this partially account for the local congestion so generally found, as at this point the *local* action was most intense and longest continued?

Therapeutical Uses.—Judged from its ability for the destruction of life, aconite was in its early history thought to have something of the same capacity for the cure of disease, and hence was used with very wide latitude. Baron von Störck made use of it in intermittent fever, chronic rheumatism, gout,

exostosis, paralysis, and schirrhous ; others, since his time, in neuralgia, anginose and catarrhal affections, scrofula, phthisis, metastatic abscess, and other cases of purulent infection, secondary syphilis, carcinoma, certain cutaneous diseases, whooping-cough, amaurosis, deafness, epilepsy, dropsies, and hypertrophy of the heart (*vide* Wood and Bache, "Dispensatory," edition 1872.) Writers of the present date agree in that its great curative power is over diseases of an *acute inflammatory and febrile character, of non-specific origin*. In this opinion there is almost perfect accord—Phillips, Waring, Ringer, Fleming among the English writers upon therapeutics, and in our own country the leading authorities upon practice of medicine, are nearly all agreed in its having control over such conditions, while our authors upon *Materia Medica* and *Therapeutics* are in perfect agreement with the English upon the question. Waring voices the opinion of all when he says its safe and effectual administration is governed by the two following conditions : " 1, That it should be given at the outset, or during the first stage of the affection ; and 2, That no complications co-exist."

"In my experience I find aconite always indicated in the early stage of simple inflammatory fevers,

where as yet little organic change has taken place ; also in the early stage of pneumonia, and in most acute congestions. It should be given in all inflammations of the serous membranes, before exudation has passed the plastic stage, especially in pleurisy, pericarditis, etc. When administered soon after the first invasion of the disease, it quickly diminishes the action of the heart, calming and subduing it ; and at the same time moistens and often bathes the skin with profuse perspiration. Subsequently it allays the fever, and prevents the spread of any congestion which may have already taken place. Aconite does not necessarily remove the exudations, but it checks and prevents the further development of the evil."—*Phillips*.

Pneumonia, simple fevers, congestions, hemorrhage, tonsillitis, rheumatism, palpitation, vesical irritation, neuralgia, pain and spasm, myalgia, toothache, and the onset of all affections arising from exposure to cold, or chill, are now regarded as being largely under the control of aconite. Its local application has been nearly superseded by the more certain and speedy results following its internal administration. By this examination into the physiological and acknowledged therapeutical action of aconite, that which the ancients regarded as one

of the most powerful poisons known has, through the experiments of Baron von Störck and his successors, proved to be one of the most valued remedies of our age. From the time the attention of the profession was called to its value as a curative element by Baron von Störck to the present, a century and more has passed, and, through experiments reaching over such time, aconite has proved its *inherent value* and its *proper place* in the remedial list. With it, as with all other drugs of unusual poisonous properties, those who introduced it into use as a remedy met a certain disappointment as regards its curative value, for, having but little or no knowledge of its *sphere of poisonous action*, they had no *guide to its use* in the *treatment of disease*. Seeing its destructive nature proven by its power for destroying life, they at once inferred it must be thus potent for good in the cure of disease, and that its sphere of usefulness lay in its control over the *most violent* and *surely fatal diseases known*.

Accordingly we find it at first administered in affections which had proved incurable under all other plans of treatment known, hoping they would yield to this all-powerful drug. Intermittent, typhus, and typhoid fevers, syphilis, cancer, scrofula, consumption, purulent infection, cutaneous diseases,

amaurosis, deafness, and epilepsy were all made the subject of experiment, and all proved independent of its curative action. After such failure many abandoned its use altogether, as being of no therapeutic value, here again proving the disposition of men to go to one or the other extreme of their subject. Other experimenters, finding that many conditions of diseased action yielded to its power, still continued its use, until gradually experience taught its remedial power to lie in the domain of the *nervous control* of the *circulation*, and in that domain it has ever held its place as a curative power. Continued research into its poisonous action has shown that persons or animals dying from its effects reveal no *post mortem* changes sufficient to have caused death, or even passing illness, but that through its depressing effects upon the nervous system the heart becomes paralyzed, and, the circulation failing, life goes out. Through all the changing conditions of, at first a warmth, flush, rise of pulse, brightened eye, suffused cheek, and injected conjunctiva, with dryness of the throat and mouth, sensations of heat and chilliness, succeeded by warm, moist skin—do the effects of a small dose of aconite lead us up to the larger dose and more marked effect, by Dr. Fleming portrayed, where the

shrunken and pallid face, bathed in cold perspiration, anguished and staring look; difficult breathing, slow, depressed, and irregular pulse, debility, vomiting, fear of death and sinking, utter helplessness and loss of all power, call for prompt remedial action, lest syncope and death occur. Such the vivid picture of poisoning which it gives, and how perfectly supplemented by the picture of one suffering from the *onset of febrile or inflammatory* disease, over which it constantly proves curative. Here again is the flushed face, the full pulse, the bright eye, the sensations of heat and chilliness, hot, dry surface, parched mouth and throat, congested vessels, restless movements, languor and debility, oftentimes with vomiting or nausea, to be, after the disease has spent its force, followed by cold perspiration, weak and irregular pulse, pallid face, shrunken form, look of anguish or indifference, vomiting of food, nausea, cramps, and helplessness, soon resulting in heart failure, sinking, and death, unless stayed by remedy capable of meeting such conditions. In the beginning of such conditions, aconite has, in almost times without number, proved curative, and in all schools of practice. By nearly all, it is the first thought-of remedy for such affection. The old practitioner

sees in it a substitute for emetic and lancet, the young disciple of the healing art finds behind its use the authority of his masters, and the homœopath sees in it the *similar* of the disease before him; while he who looks beyond all dogmas back to nature finds in it the power for which the vital force has need, if the morbid force be overcome. Here is proven the fact that the remedy works its cure regardless of the *theory* on which it was given; as the natural laws are ever superior to all dogma, and but await the proper placing of the elements to always demonstrate their existence. In the conditions above portrayed the changes wrought by the disease were limited to nervous disturbance and vascular excitement. No anatomical tissue change—other than natural wasting—had taken place outside the blood-vessels, and thus the remedy was capable of *controlling* the *whole abnormal process*. How different is the condition, when we recall the pathological changes characterizing the various diseases over which aconite was at first thought to have control. The miasmatic and fever germ, the specific poison, the scrofulous taint, the tubercular bacilli and consumption, the pneumatic infiltration, the purulent infection, the absorption of disease germs, erysipelatous infection, cancer cell, and finally the

destruction of certain nerve filaments leading to eye or ear, the epileptic seizure, or enlarged heart, with all their attendant evils,—in these all, was *aconite* tried, and what but failure could result when the limited disease-producing power of aconite was arrayed against such anatomical changes as the above list includes?

Had the fact then been known and observed, that a remedy has no direct power for curing disease, beyond the sphere of its own activity in the human economy, how much sooner would aconite have found its proper place in the remedial list, and what disappointment would have been spared its early advocates! In the application of aconite to disease we have thus far studied its effects over the more acute and primary conditions. Of its application to diseases resembling the more advanced or dangerous action of aconite, when the vital force is almost spent, the heart feeble and irregular, the face pale, the strength waning,—we find nothing but warnings to be careful, in the older writers, while Dr. Ringer advises that, if used, much less should be given “if the pulse be feeble and weak.” Under actual test, as could have been readily foreseen, it has even here proved beneficial. Many cases are on record where the spasm of angina

and threatened cardiac failure, have responded to its use; and I have frequently seen it relieve the suffering of advanced cardiac disease, and prove of inestimable value at the "turning point" of fevers when heart-failure seemed imminent. Unlike digitalis, it here has no depressing action, and the pulse which was growing more irregular under digitalis soon becomes regular under the action of aconite. As in simple fever, an excessive dose of aconite would speedily induce *all* the symptoms of the disease in its advanced form; so in advanced disease small doses seemingly act as a stimulant to the depressed energies,—much as sleep can be for a time most effectually banished by small doses of morphia.

Thus our claim is made good, that in so far as the *remedy points* by its *activity over the system*, we have a safe guide to follow in its application to disease; and that where no change of a part or function can be induced *in health* by the drug, *no response will follow* its use in morbid conditions. The claim that aconite cures fever because it lowers the natural temperature of the body, and will therefore lessen the febrile action, is the key to its use in general practice, and is advanced in argument against the principles of homœopathy. Such

claim, resting upon this one seeming inconsistency, must discard all the other similarities existing between the drug and the disease, and pre-suppose the fever to be the disease itself, against which the treatment is directed: whereas it is but the result of preceding changes, and is always controlled when its exciting cause is overcome. If the disease run on unchecked, and the congestion prove fatal, the same loss of temperature is found to occur, with the cold, moist surface so characteristic of poisoning by aconite; and that, too, with all the other changes in the action of the heart and circulation, and often the same mode of death, as aconite produces, so that the seeming want of similarity of action grows less, since the complete range of the drug action is found to cover or correspond to the full extent of chill, reaction, and fatal termination in all its symptoms and effects. The fallacy of the common comparison is found in this: that the *final symptoms of aconite action* are compared with *early symptoms* of the fever, while if the comparison is continued to the full extent in both cases the seeming difference disappears, and their symptoms are found to be very similar. Were other proof needed in this connection it would be found in the fact that aconite controls the simple fever in all stages of its

action, while it remains but congestion and fever,—thus proving its own action to be as extensive in its range as is the fever.—The principle here involved is an important one not only in the action of aconite but of almost all other drugs, since rise of temperature is not markedly characteristic of poisoning in any case, and is, when present, always of secondary origin. It fails to appear in poisoning with those substances which destroy life through effects upon the nervous system alone, and in the case of tissue irritants only develops after the drug has excited local inflammation.

Heat being a natural accompaniment of all vital organic change and in direct proportion to such change, as is proven by the natural temperature of all the different types of animal life, of necessity becomes increased in quantity whenever such vital action is increased in amount; so when disease attacks the organized structures and by such attack increases the natural changes occurring in the body, by just that much added force from without a rise of temperature must result, proportioned to such change. It will make no difference for the time whether such morbid matter be the product of retained animal waste, through disturbed function, from chill, fright, grief, or other exciting cause, or

whether it be from having taken into the system the germ from without ; such germs, bacteria, or bacilli now being rapidly proven by experiments in their reproduction, and by microscopic examination, to be organized bodies themselves, and so capable of rapid reproduction in the system, and by their presence and growth of producing inflammation or fever. Against this organic force the remedy operates, and whether in the blood of the patient or outside his body the cure is wrought by the destruction of such life. Thus while arsenic or quinine controls certain forms of bacteric life in the blood, carbolic acid does the same outside the blood-vessels or body. In this fact we find the reason for a difference in range of temperature, wrought by disease or remedy: for whereas the morbidic germ *feeds* upon the tissues of the body to prolong its own vital action, and thus increases organic change and development of heat, the remedial substance does not; since its first and only action is to destroy organization of vitalized bodies, and by such change to cause a loss of animal heat. Should the presence in the animal economy of a poison excite inflammation, the action will be the same as that from disturbed action from any other cause, since they would arise from the part being unable to perform

its natural function, and this failure would lead to irritation, congestion, inflammation, and fever; the drug, having acted as the exciting cause only in much the same manner as retained effete material, will develop morbid changes when once passed beyond the domain of vital action. Thus the fact that diseases give rise of temperature, while their controlling remedies in poisonous doses do not, falls far short of proving that no homœopathic relations exist between the drug and the disease it cures; but with this difference always—the one is an organized body preying upon vitalized tissue, and also capable of rapid increase in numbers, always at expense of the normal structures of the body, while the controlling remedy is not capable of such vitalized action, but of its destruction instead, and by this destructive process controls the morbid action; and since it *cannot give life* it is equally powerless to give that positive proof of vitalized action, *animal heat*. But as its law of action is through affinity for certain structures, it proves by such action where and what conditions of disease it can control. If it be now claimed that simple fever is not the result of bacteria or bacilli, as are many of the febrile diseases, but that it arises from disturbed functional change alone, and yet gives a rise of

temperature, the reason will become evident when it is remembered that before any rise of temperature can occur there must be increased waste of tissue. The natural functions of the body develop a certain range of temperature, and, whenever such range is increased, it is because of a more than normal waste of tissue, from the action of some element or substance outside the normal range of function. The natural functions being from any cause disturbed, result in morbid action and fever from the retained waste substances of the body, for by their very law of organization they begin to prey upon the vitalized body just so soon as they are set free of its control, for the vital structures are always maintained by their own force acting against all other conditions, and from these substances being the *product* of animal organization, not yet broken up into their original chemical elements, they approach more closely to bacteric action than elementary poisonous bodies can do. The changes they induce in the blood are of a septic nature, and thus capable of a more extended range of phenomena than are the inorganic chemical agents. Having but lately been a component part of the body, and thus a vitalized compound, their changes of normal action approach more

closely to those produced by the vitalized bacteria than they do to poisons; but yet lack this one feature of extended action common to the bacilli—they have no power of reproduction in the blood, and their action is at most only chemical or dynamic, thus resembling poisons more than they do vitalized bacteria; and in this fact lies the value of treatment with aconite *in the congestive or primary state of the fever*, for just so soon as the blood-changes begin to occur aconite fails in its control, and some remedy must be chosen having an action in the blood itself, and, like the septic germ, of destructive action upon the blood.

CHAPTER VIII.

MERCURY.

MERCURY, or *Quicksilver*, technically *Hydrargyrum*, is the remedy which will next engage our attention, and in its examination it will be our object to study it in its practical relations to diseases of the internal structures, rather than its local power over parasitic life, and to confine our attention to its most commonly used preparations.

Its use in medicine, as a local or external application, dates from early Arabic history. About the year 1497, it was employed by Gilinus in syphilitic infection, and in 1783, by Dr. Hamilton, of Lynn Regis, in combination with opium, in acute inflammatory diseases. From the latter date its use in the treatment of nearly all acute affections dates, until a comparatively recent period.

Pure metallic mercury is non-poisonous, unless given in a condition of minute division or vapor. In such conditions it is easily oxidized, and quickly produces its poisonous effects, of tremor, involuntary motions of the limbs, loss of appetite, emaciation, and salivation. The two chemical preparations with which we have most to do as of remedial worth, are the chloride, or calomel, and the bichloride, or corrosive sublimate. Calomel being, like metallic mercury, almost or quite insoluble in the liquids of the body, has ever awakened a controversy as to how its activity is produced, whenever the question of its action is considered. The basis of this argument seems to be the question of solution alone, but as no question of the *solubility* of crude mercury is raised, while its activity is undoubted, so we think much needless debate has been wasted on this question. To one at all fa-

miliar with the activity developed, through the homœopathic process of trituration, in many insoluble substances; and when we remember that crude metallic mercury needs but minute division, to enable it to exercise its activity, the mystery concerning the action of calomel grows less curious; while above all, it is not *how* but *what* its effects are that chiefly interest the therapist. To those whose search for this action has been in the fluids of the intestinal tract, and the chemical compounds there produced, and whose explanation of such action is based upon observations of that kind, the question will seem far from settled; when experience proves that all its effects are produced by small quantities in trituration, being placed upon the tongue, and not swallowed at all but absorbed from the tongue alone. If it be claimed that such small doses *are swallowed*, then it is proven that the medical effect is dependent upon the minute division, rather than the quantity usually given. Dr. Law, of Dublin, evidently had learned the value of the small dose,—as quoted by Phillips—when he had advised the giving of $\frac{1}{12}$ grain every hour. This observation being corroborated by Trousseau,—the explanation is then given that, “the smaller quantities more readily come in con-

tact with the intestinal fluids to form the double salts or soluble compounds described." Again supposing the effect is dependent upon a solution being formed, it is by no means clear just how the minute quantity, in the large quantity of solvents, can afford more of the soluble compound,—if the effect is dependent upon the quantity dissolved. By whatever manner its action is produced the tissue changes are the same as those produced by the bichloride, and as this is at once the most powerful and rapid in its action of any of the mercurial compounds, and typical of all the others in varying degree, we will now proceed to the study of its poisonous, or physiological action.

"Symptoms.—The symptoms produced by corrosive sublimate generally come on immediately, or within a few minutes after the poison is swallowed. In the first place there is perceived a strong metallic taste in the mouth; often described as a coppery taste, and there is during the act of swallowing a sense of constriction almost amounting to suffocation, with burning heat in the throat extending downward to the stomach. In a few minutes violent pain is felt in the abdomen, especially in the region of the stomach, which is increased on pressure. There is nausea with frequent vomiting of long stringy masses

of white mucus, mixed with blood, attended with severe pain in the abdomen and severe purging. The countenance is sometimes swollen and flushed, in other cases it has been pale and anxious. The pulse is small, frequent, and irregular, and is scarcely perceptible when the symptoms become aggravated. The tongue is white and shriveled; the skin is cold and clammy, the breathing difficult, and death is commonly preceded by fainting, convulsions, or general insensibility. The external parts of the mouth when examined are swollen, and sometimes present a white appearance, as if the cavity had been washed with a solution of nitrate of silver. The lips are often swollen. Suppression of urine has been frequently noticed among the symptoms,—in some cases for several days before death. . . .”

“The external application of corrosive sublimate to tumors or ulcers may destroy life with all the usual symptoms of acute mercurial poisoning. . . . No theory of idiosyncrasy is required to account for death under such circumstances. . . . The symptoms produced by corrosive sublimate in the first instance resemble those of cholera; if the person should survive several days, they are more like those of dysentery—violent straining and shreddy mucous discharges mixed with blood being frequently ob-

served. *Slow or chronic poisoning.* The symptoms are much modified when the poison is taken in small doses and at intervals, for some days or weeks. There are colicky pains with nausea, vomiting, general uneasiness, and depression. The salivary glands become inflamed and painful; the tongue and gums are red and swollen, sometimes ulcerated, and there is fetor of the breath. A deep blue line like that of lead poisoning is sometimes found around the edges of the gums. The patient experiences difficulty of swallowing and breathing. The constitutional effects are indicated by irritability or looseness of the bowels, difficulty of breathing, spitting of blood, cough, general trembling or convulsive movements of the limbs and palsy, with fever and emaciation, under which the patient sinks. One of the most marked effects of slow or chronic poisoning by mercurial preparations is *salivation*, or ptyalism, indicated by an increased flow of saliva. This is by no means a necessary symptom in cases of acute poisoning by corrosive sublimate, but it not unfrequently shows itself about the third or fourth day. . ."

"*Appearances after Death.*—These, in the case of arsenic, are chiefly confined to the stomach and bowels. Corrosive sublimate, however, affects the mouth, throat, and gullet; the mucous membrane is

softened, of a white or bluish-gray color, and sometimes inflamed. The lining of the gullet is sometimes similarly affected, and partly corroded and softened. The mucous membrane of the stomach is more or less inflamed, sometimes in patches; and there are masses of dark extravasated blood found beneath it. Occasionally it has a slate-gray color, and the mucous coat beneath may be found reddened. The coats of the stomach are sometimes corroded and so much softened that they cannot be removed from the body without laceration. Similar appearances have been met with in the large and small intestines, especially in the cæcum."—*Taylor*.

Such in brief are the general symptoms, and *post mortem* conditions, observed after poisoning and death by mercury—especially of its most irritant compound. The *corrosive* effects about the lips, mouth, throat, and stomach were owing to the caustic properties of the drug, and would rarely, if ever, find their place in the physiological action as induced by therapeutic doses. Neither would the more common effects of mercury upon the glandular organs have place in the picture of acute poisoning, since death would occur before their symptoms could develop. So to make the account of the physiological action of mercury complete that as

given above must be supplemented by a brief inquiry into its action on the glandular system and the blood. Since mercury is entirely foreign to the animal economy, and can have no place in its normal constituents, the first effort upon the part of nature after its administration is to eliminate it from the system, and in this process, if the action be long continued, all the excretory functions become engaged. The glands suffering most under such action are the liver and kidneys, salivary glands, and excretory glands of the intestinal tract. Under its continued action they all become deranged in their function, and finally changed in their texture. From the earliest records of the drug, the *liver* has been the organ *supposed* to be peculiarly under its action, and the alvine discharges taken as proof of such activity. Of late years this action has been repeatedly questioned and numerous experiments have been tried to determine its correctness, with varying results. From the liver escaping any serious or specific damage in poisoning by mercury, it would seem quite improbable that it could be largely under its action. Clinical experience has ever been one of the strongest proofs of its action over the liver, from improvement following its use, but when we remember that, through its action on the intestinal tract, as is ever

proven by the *post mortem* changes, the portal circulation was relieved, and the functions of the liver allowed, by such action, uninterrupted play—the belief in the great action of mercury over the liver grows less, and the questioning of authority more justifiable.

“The action of mercury upon the functions of the kidneys is undoubted, and they, with other glandular structures, suffer from the elimination of the drug from the system. Albumen is a frequent abnormal element found in urine in cases of mercurial poisoning, but is not invariably present. After death, congestion and fatty degeneration have been found (Balogh and others); and Oliver has pointed out the analogy between such conditions and those produced by lead.”—*Phillips*. “The albuminuria does not necessarily imply altered renal structures, it may be dependent only upon general dyscrasia and loading of the blood with organic debris (Gubler), but in severe cases steatosis is very probable.”—*Phillips*. Sugar has also been frequently found, being eliminated from the kidneys; while calcareous deposits are by no means unusual, in careful examination of the Malpighian bodies, and this in acute as well as chronic cases of poisoning.

“Mercury disintegrates or decomposes the Blood, and

thus wastes the Body.—This is the systematic action of mercury, on which too much stress cannot possibly be laid. Dr. Wright has analyzed the blood of patients under mercurial action. It is materially changed. It contains more water, and is more prone to putrefaction, than healthy blood. The fibrin, albumen, and red globules are diminished in amount, and a very fetid fatty matter is present in large quantity. . . . The mercurial, then, by some inscrutable chemical power of whose nature we know nothing, is able to decompose the blood; by some destructive agency it deprives it of one-third its fibrin, one-seventh of its albumen, one-sixth or more of its globules, and at the same time leaves it with a fetid matter, the product of decomposition. Such power is possessed by few other medicines, and certainly exerted by none in the same degree as mercury. It is an agent of terrible activity, and we may well be careful how we use it.”—*Headland.*

Therapeutic Uses.—From time immemorial mercury in local form has had credit for curing many forms of cutaneous disease, by, as modern research has demonstrated, destroying the life of the parasite producing it, and in such particular is still useful. For three hundred or more

of years, it has been by many regarded as the chief remedy above all others in the treatment of that most virulent specific disease with which humanity is afflicted. At first—used cautiously, then indiscriminately, its power began to be questioned, and by many doubted, while its capacity for harm was undoubted. This led to a reaction against its use, and to a much more restricted manner of applying it, either locally or internally. At the present time, while none claim for it the powers it was once supposed to possess, it is still used by many, with seeming success, but in much less quantity than before; and thus, while the question of its curative value in such affections is still one of debate, all are agreed that its good results can be now obtained without the damage which formerly attended its use, and that the heroic doses of the fathers are unnecessary at the present time.

In the treatment of general disease, calomel won for itself a place far in advance of any of the other compounds of mercury, and the records of its use stand to-day one of the greatest proofs of the blind following of authority with which the pages of medical history abound.

Acute Inflammation.—"Among the revolutions,"

says Dr. Waring,—“ in medical opinion, few, if any, are more conspicuous than that which relates to calomel, not only as a cholagogue, which is noticed elsewhere, but as an antiphlogistic possessed of special powers in controlling and subduing inflammation, especially of serous membranes. For upward of half a century after its claims, in combination with opium, were prominently set forth by Dr. Hamilton, of Lynn-Regis, in 1783, it maintained the highest repute, which is the more extraordinary from the circumstance that it was employed almost indiscriminately in almost all diseases of an inflammatory type. With the change which has come over our views as to the nature of inflammation, mentioned in considering antimony (to be quoted further on in this article) has ensued a change in practice, and calomel has fallen from its high estate, and there is now a danger of this remedy, possessed beyond a doubt of powerful virtues, falling into undeserved neglect. Its *modus operandi* in inflammation was always confessedly obscure. By some it was considered to act solely on the blood, in which it effected such a change as to incapacitate it from effusing lymph, and thus virtually put an end to the inflammatory process ; by others it was considered to operate by its power of increasing the secretions,

and thus to act as a derivative; by others to induce a direct constricting action on the capillary circulation. By each or all of these methods it was considered to control inflammatory action, and the occurrence of salivation was looked upon as the criterion that the system had become properly and thoroughly affected, that the inflammation for which it had been prescribed was subdued, and that recovery might be confidently anticipated. At the present day, these views have well nigh been abandoned; the power of calomel to control simple inflammatory action is doubted or denied by many, and recovery following as a sequence of salivation is regarded as a fallacy; the explanation offered of the frequent co-occurrence of salivation and amendment of symptoms or recovery in inflammatory cases being that the inflammation, which is confessedly a morbid state, yielding either to the *vis medicatrix naturæ*, or to remedial measures, the obstacles offered to the development of mercurial action being removed, salivation follows as a matter of course. Although calomel has ceased, and very properly so, to be resorted to in all cases of inflammation, even in that of the serous membranes, there are forms of inflammatory disease—*e.g.*, iritis and retinitis—in which it is pro-

ductive of the best effects, even in the acute stages, and there can be little doubt that it possesses the power of promoting the absorption of the products of inflammatory action."—*Waring*.

"*Fevers.*—*In typhus and typhoid* fevers mercury was at one time much employed, but has fallen into disuse. In reference to the former fever, Dr. Murchison (p. 264) states that he has seen many cases treated with it, but never with the slightest benefit. It has, he adds, been shown by Graves that ptyalism not only fails to relieve the symptoms or shorten the progress of typhus, but does not protect the system from being attacked. In typhoid (enteric) fever Dr. Murchison (p. 569) also states that, though mercury has been strongly recommended, he in his own experience found it both useless and injurious. In the early stages of these fevers, and also in relapsing fever, if jaundice or other hepatic complication exist, a calomel purgative may be admissible, but in all cases the greatest caution in its use is requisite, and in the enteric form it is apt to act too powerfully as an irritant.

"*In intermittent fevers*, mercury is wholly uncalled for, except as a purgative to remove fecal accumulations or hepatic congestion, when these conditions exist."

"*In remittents* the calomel treatment introduced by Dr. James Johnson, and advocated by Annesly, Twining and others has fallen into almost total disuse. . . .

"*In bilious remittent, or yellow fever*, mercury has had many advocates, whilst others regard it as useless, if not injurious. . . . Amidst the doubts which surround the subject, there is much force in the advice of Stillé (ii. p. 702). The part of prudence is probably to abstain from mercurialization in yellow fever as a general rule." . . .

"*In puerperal fever*, the treatment by mercurialization, formerly in vogue, has been partially or altogether abandoned for a more rational mode of cure. . . .

"*Diseases of the Heart*.—The heroic treatment of *cardiac inflammation*, advocated by Drs. Latham, Hope, and others, consisting of venesection, and rapid and full mercurialization, has been superseded by milder and, it is believed, more effectual means." . . .

"*Diseases of the Lungs*.—*In pleuritis* mercury is still employed by some, but Dr. Waters (pp. 217–226) in common with the majority of modern practitioners, has abandoned all confidence in it as a remedial agent, or in its powers to produce absorp.

tion of pleuritic effusions; indeed, he considers that, if given to any extent it produces in most cases positive harm." . . .

"*In pneumonia*, calomel, either with antimony or opium, was formerly regarded as indispensable, but it has of late years fallen into comparative disuse." . . .

"*Diseases of the Throat.*—*In croup* mercury is a remedy of great value. Some mild cases may yield to antimony (Sect. 196) without its aid, but in the severer forms it should be had resource to without delay, and persevered in till amendment occurs. . . .

"It is not to be used to the exclusion of local and other general measures, especially the use of a hot (70°–75°) moist atmosphere."—WARING.

In diphtheria the evidence in its favor is of conflicting nature, but of the two, conjoined with other measures, having much evidence in its favor. In my own experience I have had much better success with the iodide of mercury.

Again referring to the very complete compilation from the various authorities upon the use of calomel, by Dr. Waring, we find that the same line of evidence against its general use in *meningitis*, *insanity*, *hydrocephalus*, *tubercular meningitis*, and *diseases of the abdominal viscera*, is much

stronger than all that can be adduced in its favor. Under the last named class of affections *acute gastritis* is found to be a marked exception, Dr. Waring asserting that "mercurial purgatives are among the best remedies."

In the treatment of *acute dysentery* calomel has been largely superseded by the use of ipecac, and other remedies; because, as it is claimed, the after-effects of the mercurial treatment, under the large doses used, were of serious nature. *In cholera*, calomel has been long used, and "in every variety and stage of the disease, in every gradation of dose, from one grain to sixty."—(WARING.) While all are now agreed in the uselessness of the large doses, if not in their absolute injurious effects, there is less uniformity of opinion concerning the utility of small or medium doses, but a lack of evidence in their favor, since none seem to have trusted to such treatment alone.

In diseases of the kidney there is also conflicting testimony. The authorities are agreed in the injurious effects of large doses, and while claiming beneficial effects in albuminuria, of specific origin, are doubtful of its value in the non-specific forms of disease. *In acute rheumatism* the same uniformity of evidence against its use is found: "Mer-

cury combined with opium, carried to the extent of producing salivation, was a mode of treatment formerly much in vogue, but has now fallen into comparative disuse."—WARING.

These, in the order above quoted, are the diseases in which mercurials were wont to be used, and, aside from its local use, and the indirect benefit in some minor affections following its action upon the glandular system, comprise the sphere in which it has proven its value as a remedial agent, or convicted the profession of its unscientific use. Having had a trial such as has been to no other remedy vouchsafed, it has failed to hold the high place once given it in the professional mind; and the long list of diseases in which it once had first place in treatment is now arrayed, by unquestionable authority of the same school, in proof of its insufficiency. In choosing mercury as one of these drugs by which to demonstrate the claims of my argument, it was not that it is now less used than before, but that its sphere of physiological activity, is like that of *aconite*, in marked parallel with the pathological conditions over which it proves curative. When remembering the long list of affections in which *experience* has proven it of *no value*, or of actual injury, we at first wonder how

it could have called such marked attention to itself, and ever have been thought of such therapeutical value. The explanation is simple. Like aconite, the fathers in medicine found it possessed of untold power for the destruction of human life: that it was also valuable in curing many local diseases, now known to have been of parasitic origin; and to have certain control over the most virulent scourge of ancient and modern life—specific infectious disease. By knowing such *facts*, they said, theoretically, that it must be curative over many other conditions of internal disease, and accordingly, in combination with other remedies, set about its use; their *theory* of *cure* having been *formulated before* they studied the accurate manner in which the proposed remedy, disturbed or destroyed life. Seventy years' *experience* proved to the profession that their *theory* was wrong, and the result of such practice unfavorable.

Turning now from its failures, let us look for the success attending its use, for with a drug of such potency it would, indeed, be strange if in its manifold use no triumphs had attended it. The doubt which has attended its later use in all inflammatory diseases has been marked in connection with its power of cure over the specific disease in which

it won its first place in professional favor; and when we recall the great similarity existing between the clinical history of such disease, and the power of mercury for producing the local ulceration—cutaneous eruptions, throat affections, changes in the osseous system, and general destruction of blood constituents,—the connection between the condition cured and the curative remedy became self-evident. The disease germ and the mercurial poison both make their presence known by a corresponding set of symptoms, while experience proves the mercury to have destructive influence over the disease-producing germ—and, by this power, control over the conditions it creates. In such experience it has again been proven that the large dose but added its effects to the pre-existing condition, while the smaller quantity controlled the symptoms just as well.

In the order of *inflammatory diseases*, two conditions stand out in striking contrast to the general denial of virtues possessed by calomel, as given by Dr. Waring and others. In *affections* of the *throat* and in *gastritis* the claim of utility is positive, while in *acute dysentery* calomel is rejected in favor of ipecac, from the serious sequelæ following its *excessive* use. When we remember that inflammation of the

throat and stomach are among the most prominent effects of poisoning by *corrosive sublimate* the reason for the above-named exceptions becomes more evident; while symptoms of inflammation, especially of the small intestine, and the colon, with their *post mortem* conditions, point to the value of mercury in such affections, and account for the place it has held in their treatment. While the evidence of its value in the treatment of *albuminuria* is conflicting, there is much in its favor, especially if the disease is of specific origin, and this again finds a partial counterpart at least in the poisonous symptoms and *post mortem* changes of mercury. Such, in brief, are the relations shown to exist, both by the pathological conditions of the diseases and the disease-producing power of the drug, between mercury and the morbid conditions over which it is found to have control, and had this law of nature been observed in the application of mercury to the cure of disease, this failure and retraction—the greatest blot upon the historic page of therapeutics—could not have occurred. Perhaps in the case of no other remedy or plan of treatment has there been so great a change in the therapeutic value in which it now is and of late has been held. The time is not long past when no medicine case would have been

deemed complete without its bottle of the "mild chloride"; and no patient in "regular" hands could have gone through a course of disease without the remedy having place in the treatment. In specific fevers, in malaria, in rheumatism, in consumption, in the puerperal condition, in *all* the inflammations, it was of prime importance—but now its use is of exceptional nature, its quantity small, its dose infrequent. Had its disease-producing power, and the functions or organs affected, been taken as the criterion of its usefulness in disease, no such error could have been committed. Medical science would have been spared the charge of having no fixed order of action, and that fashion governs her administrations. Physicians would have found success where blind adherence to theory has led to failure and retraction; while multitudes of patients would have had longer lease of life—had nature, rather than *theory*, pointed to their remedial needs.

This change of practice is now said to have been owing to a change in the view of the profession as to the *nature* of *inflammation*, but the *fact* remains that the *symptoms* of *inflammation* have *undergone* no change, nor can they, and through them are we to learn of its existence and its remedial needs.

"With the change of our view of the nature of

inflammation and febrile action, a corresponding change has taken place in our views as to the applicability, or even the safety, of antimony (and in the article on mercury he says the same) in this class of affections. Still there are a large number of cases—larger, perhaps, than most persons imbued with the prevailing views are ready to admit—where there is an undoubted abnormal increase in the vital action, the symptoms of which, in the aggregate, constitute true inflammation and fever, in which the antiphlogistic treatment generally, and antimony in particular, are clearly indicated and unmistakably useful.”—WARING.

Perhaps in no shorter or more concise wording could there be found the proof—from so high authority—of the basis line of our *argument being true*, for proving that changing *theories of disease*, produce *changing plans of practice*, and that where such views of disease are faulty the practice must needs be imperfect.

CHAPTER IX.

IODINE.

TURNING by easy gradations from the study of mercury, and its influence over disease, to the action of iodine, we hardly seem to have left the former, for they not only combine in chemical proportion, forming the *iodide of mercury*, but their separate effects on the human system are in many ways similar, and are thus clinically useful in many morbid conditions alike: but when we compare the therapeutical history of the two drugs, the parallel ceases, for whereas mercury has failed to prove its power over the diseases in which so long, but wrongfully used, iodine has kept its place with but little change; and since the power of either for cure of disease is dependent upon their inherent activity over function and tissue, the inference is at once evident, that iodine was, *primarily, the more scientifically used*. Iodine has ever had the confidence of the professional mind, when used in its legitimate sphere, and not in the blindly heroic doses in which some physicians delight to prescribe the iodide of potassa.

Turning again to Dr. Waring's very complete

work on therapeutics, from its voicing the leading minds of the profession, we find uniformity of opinion concerning the clinical uses of iodine, but before giving such evidence of its value it will be in keeping with our preceding illustrations to examine its history and physiological action.

Iodium.—Iodium, or iodine, is a non-metallic element discovered by Courtois, a soda manufacturer, in Paris in 1812. Traces of its presence are found largely distributed throughout nature,—in sea and many specimens of fresh water, in numerous mineral waters, in the atmosphere of some localities, in sea weeds, in some fresh-water plants, in numerous varieties of food, such as potatoes, wheat, beans, barley, peas, oysters, also further in the animal kingdom, in the sponge, eggs, cod liver oil, and other sources, and lastly in the tissues of the human body. It was first discovered in the United States, in the waters of the Congress Spring at Saratoga, by Dr. William Usher.—“*Dispensatory.*” In 1819 it was first used in medicine, and was then regarded as a general excitant of the vital functions, especially of the absorbent and glandular systems. In varying dose and combination it becomes not only excitant to the glandular system, but highly irritant and corrosive.

That iodine is by combination with albumen or other elements of the body rendered soluble, and therefore capable of absorption into the circulation, is now accepted by the profession as having been repeatedly proven by actual test as well as by its speedy appearance in the different secretions and excretions of the body, very soon after administration by the mouth or by absorption from the skin, mucous, and serous surfaces. The commonly accepted view is that it combines with the albumen, sodium, or potash compounds of the system, and by such combination is rendered soluble, while its elimination is in form of potash or sodium iodides, in solution in the excretions.

“Symptoms.—From experiments on animals, as well as from observation of its effects on man, iodine has a strong local action as an irritant on the stomach and bowels. In large doses it occasions burning heat in the throat, severe pains in the abdomen, with vomiting and purging, the vomited matters containing the peculiar odor of iodine, and being of yellow color, except when any farinaceous food has been taken, in which case they are blue or even black. The fecal matters also contain iodine if the poison has been taken in the solid state. . . . Besides these symptoms there is

great thirst, with anxiety, headache, giddiness, trembling and convulsive movements of the limbs, and fainting, these last symptoms indicating that the poison has become absorbed. When taken for some time in small doses, it gives rise to salivation, vomiting, and purging, pain in the stomach, and cramps; the pulse becomes small and frequent; there is a general wasting of the body. . . . Iodine produces these secondary effects (iodism) whether it is taken internally or applied externally."

"Appearances after Death.—As this is an irritant as well as a corrosive poison the lining membrane of the throat, stomach, and intestines is found inflamed and excoriated. In one instance the mucous membrane near the pylorus was corroded, and detached in a space of two or three inches."—*Taylor.*

Therapeutical Uses.—Iodine had its unknown place in the treatment of disease long before its existence was discovered. Empirical use had proven the *burnt sponge* and the *ashes* of some seaweeds to have curative value in the treatment of enlarged glands, and other affections of a scrofulous nature, and their use is recorded in the very early history of medicine. Iodine is now regarded as being either pure, or in its compound with potash, the active principle in the powdered burnt sponge,

since such powder has but little activity without it.

“*In scrofula and scrofulous affections* generally iodine and its compounds hold a foremost place in our list of remedies, though the benefit derived from them is far greater in some cases than in others.”—WARING.

“*Phthisis*.—Chronic congestive conditions of lung following acute inflammations, are usually connected with the scrofulous diathesis—pneumonic phthisis especially. In such cases benefit may be obtained from iodine preparations—I prefer the tincture—but the iodide of iron, or the iodide of ammonium, is useful, according to the case.”—PHILLIPS.

“In the more acute form of tubercular phthisis, when the patient suffers from loss of flesh, quick pulse, high temperature, pain, cough, dyspepsia, and nocturnal sweatings, the tincture given every four hours, and inhaled, as well as applied locally over the chest, offers a chance of arresting or ameliorating the disease. In some cases under my care this treatment appeared to check the disease. In tubercular phthisis, in the absence of acute symptoms, I have seen benefit from iodine and the iodides, but have sometimes noticed hæmoptysis following their

use, and therefore recommend caution in cases disposed to hemorrhage."—*Ibid.*

"*In Bronchitis*, in the subacute and chronic stages, iodide of potassium, or of ammonium, relieves by an alterative action on the bronchial mucous membrane, thinning and ultimately diminishing the semi-purulent tough secretions."—*Ibid.*

"*Catarrh*.—Iodide of ammonium in one-gr. doses every two to four hours, is a good remedy in ordinary acute catarrh."—*Ibid.*

"*Sore Throat*.—In cases of follicular tonsillitis, or when spots of ulceration about the local mucous membrane are induced by cold, small doses of iodine are useful."—*Ibid.*

"*Croup-Diphtheria*.—The tincture of iodine, as well as of the iodides, are very valuable in these disorders, especially in their early stages; they should always be given in conjunction with aconite, and occasionally the judicious use of an emetic is serviceable. I trace the benefit following the use of the iodide partly to a local effect, rendering the false membrane less tenacious, and partly to an eliminant action on the kidneys"—*Ibid.*

"*In Croup*, Mr. Copeman derived great benefit from the external application of tincture of iodine twice or thrice daily. Its use was in all instances

attended with great relief to the patient, and it probably tends to prevent the formation of false membranes. He illustrates several instances illustrative of its efficacy."—WARING.

In acute and chronic meningitis the iodides have been very generally used, and while there is some doubt as to their efficacy, the weight of evidence is in their favor, and the leading authorities are very uniform in recommending their use. *In rheumatism*, either acute or chronic, there is also a general argument as to the uniform benefit following their use, through, it is believed, the eliminative function of skin and kidneys being increased, but there seems to be no specific connection between iodine and rheumatism.

In the quotations from Dr. Waring, the comprehensive statement that all general diseases of a scrofulous nature were benefited by iodine, covered that long list of local affections having the cachexia back of them, and of which it will be needless for our object here to speak; neither need we dwell upon the many local affections of a surgical nature found to be under the control of iodine, for, as our purpose is to show, that iodine has affinity for the glandular structures first, and for the mucous and other tissues later, and that by this action has a de-

pleting effect upon the blood, it will become evident that its curative power over diseased conditions of such structures is established when the long list of glandular, wasting, and specific diseases find in it their chief element of control. The repeated caution given by Waring and Phillips that their use in many of the affections over which they have control is attended with danger or aggravation of the symptoms, is strong presumptive evidence that the part or function of the body under control of this morbid process is also under the control of iodine, and that a *similarity* of symptoms between the two conditions must exist, since one is so easily increased by the other.

Again, when we remember, as Dr. Waring emphatically states, "*that it causes emaciation of the body generally,*" and proves curative over *phthisis, over wasting diarrhœa, over chronic inflammation,*—of strumous or specific type, located in the *stomach or intestines*, its connection with the processes of nutrition becomes evident, and its power of control over conditions very similar to its own active symptoms, plainly manifest. Again, in the treatment of croup, and largely so in diphtheria, we find in iodine a remedy of almost specific control. I have treated cases of membranous croup most satis-

factorily with tinct. of iodine in fractional doses alternated with aconite for the first twelve hours—the membrane coming away in long detached shreds. I first used the tinct. of iodine when so placed as to be unable to get the tinct. of spongia which I had seen used, and since my first experience with iodine have never cared to change. My experience with the same remedy in treatment of coryza and laryngitis has also been most satisfactory. In diphtheria the remedy giving me most favorable results is the iodide of mercury—in fractional doses—with tinct. of iron in alternation, coupled with supporting measures. The success following the use of iodine in these affections, like its use in diseases of nutrition, clearly demonstrates the connection existing between the affinity of iodine for certain structures of the body and its curative power over diseased conditions affecting such structures. Did the length of this essay permit, much more could be advanced showing such relationship to follow into its most minute sphere of activity, and its control over diseased conditions; for this law of relationship, or similarity of symptoms between the disease and its curative remedy, being established in general outline, continues to act through all the drug-producing changes, and he, who, in the treatment of dis-

ease has found no disappointment in following the leading indications, will meet the same success when trusting to nature's more careful guidance.

As there is a certain connection between the chemical relations and natural action of iodine and mercury, so there is found to be something of such relationship between iodine and the next topical remedy to which we shall call attention, and in the action of iron we shall find the wide-reaching sphere of iodine again made visible, standing as it does midway between the destructive action of mercury and the nutritive changes wrought by iron.

FERRUM—IRON.

This well-known subject needs no introduction, for its medicinal worth is well known, and whether in the hands of the profession or the laity, it has from early ages proven its curative value in certain forms of debility; and this certainty in special cases has often led to failure in its use, since from its proving "tonic" in some cases it was believed to be in all cases of debility. Records of its early use in the cure of disease are lost in the obscurity surrounding the history of primitive medicine. Hippocrates makes no mention of its use, it is asserted,—but that it was used even farther back than his time is

probable. In its history we find it looked upon as a "tonic," and used indiscriminately in all forms of debility. Like all the other remedies which have won a favored place in the therapeutical list, it had to contend with the skepticism of those who blindly used it in every form of disease, often before the acute action was past, and failing in their efforts, concluded its virtues for cure were but fancied, and condemned its use. The striking recoveries sometimes following its administration, however, served to keep it before the profession, and to eventually give it its valued place. From the readiness with which iron combines with many other chemical elements its compounds are numerous, while in combination with other drugs it also is largely given, so that we now find fifty preparations recognized in the British and American Dispensatories. Many of its preparations are now but little used, and but little reason can be urged for their continued recognition. In whatever form iron is administered, its curative value is dependent upon its *restoring* the small amount of iron to the *hæmotosin* or coloring principle of the red blood globule, for on this proportion of red coloring matter, and general constituents of the blood, the condition of general strength is dependent. Iron then becomes, not a

remedy in the general meaning of the term, but a food-principle to the blood, whenever its natural supply is disturbed, or its normal waste increased. In this fact is found the reason of its therapeutic value, and the explanation of its success or failure. While physicians were debating as to its sphere of action, this natural fact was being time and again enacted before them, and their skill in the cure of disease with the compounds of iron was dependent, not upon their theories of its action, or the range of its preparations, but upon their conforming to this, the law of nature ; and when so obeyed, however blindly upon their part, the natural result followed, while no amount of theory could produce a favorable result if the natural requirements were unheeded. Unlike the remedies having distinctive power over life, iron won its way to the professional father's mind by the brilliant success sometimes following its use ; but then, as in case of the other remedies, he argued that being curative in some diseases, and markedly so, it must be in all forms presenting the same general symptoms, much as in the case of aconite, when it was believed to be curative over all forms of fever, since it so speedily controlled the simple form.

Not seeing that iron was of slow action,—as are

all compounds of a restorative nature,—it was often given in acute affections, and as often failed of relieving. Then as now, when more rapid results were attained with iron, it was from the combination with a more active element, and to such element the effect is primarily due. The modern use of iron in diphtheria proves almost inert, if not combined with the powerful mineral acids. Of its numerous preparations individually, and of its local effects, we need not enquire, since our purpose is accomplished in showing that in the clinical use of iron, as in many other remedies,—having found by experience their value in certain conditions, they as often left such demonstrated fact, and began its use in accordance with the theories they devised. Would the length of this essay permit careful examination into the use of nearly every remedy of potent or valuable properties, such would be found to be the common history of all. As in natural history every object is typical of the class to which it belongs—so in therapeutics, every function-disturbing drug has its special affinity for certain portions of the nervous system; and in detailing the action and therapeutic history of *aconite* I illustrated the nature of all remedies, whose power for good or bad never reaches beyond

the sphere of functional change alone ; and in this sphere only can they prove curative, by direct action over disease.

In specific fevers, in blood poisoning, in constitutional tendencies, and in tissue changes they have no direct control. Nature having circumscribed their sphere of action, they can by no possibility go outside such bounds to produce their effects, and only when the morbid change comes within their respective sphere can they prove curative. Like sentinels they are placed, having their special work in nature's province, and in such sense we must bring the disease to them for treatment, rather than bring them to the disease, and by their *poisonous action* they ever tell *where* their province of cure is to be found.

The reasoning which applies to the function-disturbing remedies also applies to those capable of producing *tissue change*. Experience has proven them to have no direct control over disease of a purely functional type, unless accompanied by tissue change somewhere in the body ; and although it may yet prove true that all diseased phenomena are the result of minute tissue change, as yet the division line is very distinct, and in prescribing we have to make the practical distinction. That power im-

planted by nature in the function-disturbing class is also found in the class of tissue irritants, and although often denied, it is nevertheless always by examination found true, that this respective value of each, in the cure of disease, is always in proportion to its disease-producing power, and that its curative properties are best seen when applied to diseases located in the organ over which it has most control. What but this law gives mercury its superiority over iodine in the cure of specific inflammation, or of aconite in the control of general non-specific congestion, while iodine surpasses both in its curative value in diseases of the nutritive structures; while, again, iron is of no value in either of the above-named conditions, but far surpasses both in the cure of anæmia. If it be claimed that iron is no proof of the claim now advanced, since its excessive use does not produce anæmia but plethora, that claim is met by the fact that nature has set the limit as to how much iron the hæmatosin can absorb, and that if such limit be surpassed, the plethora induced is but the first of a series of conditions of irritability which eventually so disturb the function of stomach and absorbents as to induce debility from its irritant properties, and proves that while iron, like lime, soda, potash, phosphorus, and the

other constructive elements are natural to the system in certain quantity, they are capable of producing morbid conditions if present in too great quantity, or if in less than nature's required proportions; and that the disturbance their excess works in the system is through the function or tissues they have most affinity for. That iron is capable of working ill effects has often had its proof in the disturbance of head and stomach, heart and lungs, when the favorite and massive doses containing more iron at a dose than the blood could ever contain at one time were sometimes given. Had iron possessed that rapidity of action which characterizes other remedies, most injurious results would have often followed its blind administration, and men would have sooner learned that *curative effect is not dependent upon the quantity given.*

As iodine was found to combine with mercury both in chemical and clinical use, so is the compound of iodine and iron found to control conditions of disease over which either alone would prove powerless for good; for the absorbent glands may become so changed in their operations as to need the action of iodine to enable them to absorb the iron when present, in the same manner that they sometimes fail in their action upon the common

food, however well prepared and carefully given, unless iodine or its compounds is present to promote absorption. Thus iodine is found to occupy a position midway between the irritant action of mercury and the restorative action of iron, to be in large doses an irritant, in small quantities a promoter of nutrition—if not an actual necessity of the system—if it remains in a normal condition.

Examination into the history, action, and acknowledged curative value of aconite, mercury, iodine, and iron has demonstrated beyond all question that their curative value is in keeping with their disease-producing properties, and that experimental practice with each has demonstrated such fact. The authorities quoted at the risk of being charged with prolixity of detail are unquestioned, and their combined evidence forces the conclusion that the drug must be proven by actual test upon the healthy person, or by disconnected experiment in the disease, before its true value can be known, or intelligent use made of it in treatment of disease. The many failures made with remedies convicts the system which first "*tries*" *them in disease* of unscientific basis, since chance alone largely determines the result, and countless experiments are needed to establish any fact, since all are open

to error or fallacy, while in all cases the ultimate result has been to force their final use in those maladies whose range of morbid action is in complete correspondence with the physiological action of the remedy; and had such action of the drug been first determined, the intelligent use of it in disease would have been much more speedy and certain.

This fact once established or admitted, leads at once to another of practical value: knowing the range of action peculiar to any drug would at once be the determining point in attempting to produce a cure with it; and nothing but the most unreasonable following of authority would attempt to place it in a class or in disease wherein it had no especial affinity, and could only act through sympathy alone. This knowledge applied to the action of iron or iodine would at once define their place of action as being in the blood in the one case, and in the glandular system in the other, and if it had been at first determined, the early use of iron would have resulted in less failures, and iodine could have been made more "specific" in "scrofulous" affections than its early history proves.

The action of the four remedies referred to demonstrates each as peculiar of the class to which it belongs, and their therapeutic history is typical

of all their order. The one whose range of action is confined to the nervous system, and its control of the circulation, failed when brought into contact with disease affecting the structures or the blood, and while mercury cured specific disease having its seat in the blood, it failed to control anæmia of the blood where no such poison existed; and as iron met this condition when its own element was lacking, it also failed to control anæmia where other elements than hæmotosin were needed, and thus proved inferior to iodine, where such defect in the blood required the natural action of the glandular organs to prepare the digested food for assimilation. Thus each article of the materia medica will be found to possess some peculiar action, and its value in disease will depend entirely upon its being so placed that such action can find its sphere of control; and such sphere can only be determined by an actual proving of its action upon the healthy system.

The disproportion already existing between the accumulation of pathogenetic knowledge and its application to disease is well proven by an examination of almost any "text-book" upon materia medica, and such increase must continue unless some means be discovered for the utilization of

such knowledge. That the drift or tendency of extreme research into pathology has created much skepticism in the value of medicine is proven by the secondary place "treatment" occupies in many works upon practice; the writers seem to believe that the changes found *post mortem* could not have been controlled by any treatment known, at least to themselves. This becomes the proof that unless a knowledge of the full action of drugs upon the human system keeps pace with the investigations into the changes wrought by disease, such research fails to make men skilled in treatment, and hence we often find physicians much better skilled in telling what your trouble is than in controlling your difficulty; so evident is this fact that the eminent Prof. Bartholow prefaces his well-known work upon *Practice of Medicine* with the following statement among others bearing upon this point: "The influence of some of our most prominent medical thinkers has been opposed to the value of medicines in the treatment of disease. The modern school of pathologists, absorbed in the contemplation of the ravages of diseases, are either oblivious of the curative powers of remedies, or openly ridicule the pretensions of therapeutists. I have, therefore, in the therapeutical sections, especially endeavored to set

forth true principles, and have taught the utility of drugs when rightly administered, but have none the less tried to indicate the limits of their utility, for he who is unmindful of the injury done by ill-directed or reckless medication is as unsafe a guide as the most pronounced therapeutical nihilist."

While a doubt must be indulged as to Prof. Bartholow having taught the "true principles" of therapeutics, none can be held as to the value of his purpose, and his evident belief that the true mission of medicine is the *treatment of disease*; and the very large sale of his work justly warrants the conclusion that his belief is endorsed by many of the profession; and more, that the most evident need of to-day is a *better knowledge of drug power, and how to utilize it*.

In my argument will be found a brief notice of the difference in attention allotted to the physiological action and the uses of many of the more active remedies, by Prof. Brunton. While most thoroughly defining the mode of action and the effects of the remedies, he dismisses them by the briefest reference to their value in disease, and by such process utilizes but a small part of their well-defined action. If it be claimed that but one or two of the effects produced by many of the drugs

includes all their remedial worth, then much more of their action must go to waste, or prove injurious, unless such effect can be isolated from the other actions by isolating the principle producing it. The true reason for this *excess* of material is to be found in the *defect* of the *system* using it, and in this wise: the application of medicine to the cure of disease by the law of *contraries* has no way of utilizing all the effects of the drug; *since there is such an extended range of action peculiar to nearly every remedy, as to make some of its effects other than antipathic to the disease*, and hence of injurious action in the treatment. This excess of action is manifested in a multitude of ways, and is always an element of regret to those having to contend with it. The "constipation has to be overcome when bismuth is given for gastritis;" the action of digitalis upon the kidneys, liver, and brain is objectionable when used for functional palpitation; arsenic produces ill effects upon the stomach, intestines, kidneys, and circulation, when but its effects upon the skin is desired, and thus often before the "puffiness of the lower eyelids" is reached the patient is made ill, and his skin disease aggravated. Often the complaint is made that iron would prove a better tonic were it not for its

“astringent action on the bowels,” or that cinchona would prove more tonic in some individual case but for its irritant—cathartic—action on the intestines, while aloes must often be discontinued in constipation from its producing hemorrhoids, or causing premature and profuse menstruation; or that iodide of potassium would eventually “cure the tumor,” did not its irritant action on the bronchial tubes, or destructive effect in the blood, compel its disuse. How often we hear it remarked that such or such remedies would prove of value in certain affections were it not for their disturbing effects in other directions, and yet those who make the regret boast of *their scientific* application of medicine to the cure of disease, when almost every remedy they prescribe would prove much more valuable to them had it *much less range of action*. Of what claim to scientific precision has the prescription which has to include opium among its “cathartic ingredients to prevent their griping effects,” or what skill is shown in the compounds containing one “active,” drug and several others to “guard against its disagreeable effects”? Mercury is given with opium that it “may not run off by the bowels,” opium is combined with ipecac that the latter will not vomit the patient where some other effect is desired, and with

antimony that the patient's stomach will bear the latter. Cathartics are combined with mercury to "increase *its* action on the bowels," and opium is added to tannic acid to increase its astringent action. On the other hand, complaint is made that nitrate of silver would cure intestinal ulceration were it not for its "constitutional effects," salicin would be a better medicine in rheumatism did it not produce debility of the heart, and quinine would prove of more general value did it not cause "buzzing in the head," and thus through all the list. Hardly a drug proves an exception to the rule, and the complaint is constant that effects other than those desired are produced by nearly all the remedies used in the cure of disease by the law of *contraries*. This confused condition of therapeutics results from the system of established practice being unable to utilize the full effects of hardly a single drug, and in just the proportion that such complaint is made, is the system convicted of insufficient range of adaptability to meet the requirements of nature upon either hand; and just so long as the physician must give some *corrective* for his remedy, is he guilty of failure to meet the demands of an exact science. Fearing the cathartic principle to be too strong, he adds some astringent, and again,

fearing such astringent action, he adds the laxative, or fearing his "heart tonic" may prove too much of a sedative, he adds the stimulant, or again fearing the "saline cathartic," may "pass through the kidneys," he increases the amount that some may remain for the bowels, and again dreading the strangury which may follow the use of cantharides, he denies himself its aids in cystitis; and when amid all this therapeutic confusion he finds, most happily for himself, some remedy which will *alone* cure his patient's trouble, he gladly hails the vaunted "specific," and thus relies on quinine in intermittent fever, ipecac in asthma and dysentery, rhubarb in summer diarrhoea, digitalis in dropsy, aconite in simple fever, nux vomica in general spasm, and cactus in heart spasm,—and were his professional short-sightedness less marked, in this rough field of homœopathic pointings he could find many more "specifics," and should he finally reach the well-known field itself, he would there find a rule directing him how to use all this excessive action of his remedies without the correctives, and with benefit to his patient, and that rule would be the *law of similars*.

CHAPTER X.

CONCLUSION.

IT will have been observed by those who may have thus far followed my argument and its application, that I have not gone outside the "regular text-books"—for my material for illustration, nor have I quoted from any but the highest authorities in support of the principle or fact I would urge, and yet I leave it to the impartial reader if not enough has been advanced to prove the case, and so make good the claim advanced in argument, that proving of medicines upon the healthy subject is a more rapid, accurate, and scientific method of learning their pathogenetic and curative value, than by experiments upon the sick and theoretical deductions from such experiments; also that such experience reaching over many years in the trial of some of the remedies has eventually served to prove the truthfulness of the homœopathic principles; since the result has denied the truthfulness and complete adaptability of the *law of contraries*. Had I gone outside the "regular text-books" for my proof the evidence could have been made much more direct, but instead, I have let the evidence furnished by

the accused system alone prove its conviction before the tribunal of applied science, known to be in harmony with the laws of nature. Neither can it now be urged that my object has been to prove the superiority of homœopathic practice, for had such been my present aim its own records of success in actual practice would have afforded the best source of evidence. My object has been instead to find wherein as a science or system it can be proven to have the endorsement of nature and her laws, and to be in that proportion superior to all systems of cure resting upon experimental knowledge alone for their support. No branch of science is thus found to rest, and if medicine rise above the level of an art of simplest form it must be by conformity to law ; nor need we hesitate when told that so many circumstances are beyond our control, as to prevent more positive success, for such circumstances are often found of easy control when their controlling law has been discovered. The study of pathology and of the action of drugs upon the tissues of the body have long continued in parallel courses, but never have blended for the good of humanity as nature designed they should do. The dissector in the dead-house, and the physiologist in the laboratory have each continued earnestly and

honestly at their labors, and have each unlocked many of the mysteries of disease, and the power of drugs over the tissues of the human body, but neither have found the valued key or guide, for the blending of such actions for the cure of disease. While these students of nature were here pursuing their researches, another at the bedside in hospital or elsewhere was as carefully studying the symptomatology of disease, and tabulating them for human use. From each pursuing his studies alone, and making little note of other's discoveries, they failed to see the practical relations the one part bore to the other, and so when their researches were combined and turned to practical account in treatment, they failed to harmonize, and much skepticism has resulted, and when carefully examined were found incomplete as a whole, for one division of the subject was found wanting, and he who had been pursuing it was not represented in the effort to make an exact science from the isolated parts. This student of nature was the ostracised brother devoting his time to the study of the symptomatology of drugs under the system of homœopathic *provings*: bringing now his contribution to the general fund the deficiency is made good, for in comparing his tabulated statements, easy of verifi-

cation, with those of him who had studied the symptoms of disease, they are found to be *much alike*, and again making comparison between the changes wrought by poisons upon the tissues of the body, and those produced by disease, they are also found to closely resemble each other. Thus there is found a similarity of symptoms between the drug and the disease, and another correspondence between the changes wrought by both upon the body, when acting alone, and that a "totality" of symptoms in disease will find a counterpart in the range of drug action. In established medicine this fact can not be utilized, for the aim is to find something to "produce an opposite set of symptoms from those of the disease," and knowing that cantharis inflames the kidney or phosphorus the lung proves of little value, for if true to their "principle," neither could be used in treatment.

As no system of natural philosophy could be complete which would ignore a part of natural law, so no system of medicine can be perfect that rests upon any theory or dogma, to the exclusion of an evident or demonstrable law of action; neither can the denial of a law make it any less a law, and thus he who conforms his operations to it will find success whether he know of its existence or not, but while blind em-

piricism has not and cannot make scientific results in accordance with some law, there must be, if at all successful, some conformity to it; hence, that system of medicine will prove most successful which makes most intelligent recognition of nature's requirements. All theories of cure resting upon experience alone, however plausible, have but theoretical basis, and can never become more than theory, since nature denies their truthfulness by frequent failure, and so all that now is, or yet may become, scientific in the practice of medicine must look to nature for its permanence, since her authority will change theory to law.

The three systems of medical practice, allopathic, homœopathic, and eclectic, now recognized by the public and the courts of our country are agreed in the basic elements of the science, and offer no objections to each other's faith until the highest branch of all research is reached in the *treatment* of disease, and by this act prove its vital importance and substantiate the fact urged in my argument, that therapeutics being, as commonly taught, farthest removed from a natural basis, becomes thereby most subject to *theory*, and hence to disagreement.

Here is found the weakness of established therapeutics: having no certain basis upon which to

build, experience became the guide to practice and individual judgment the test of success. Each advocate of a plan of practice urged his per cent. of cures as proof of the superiority of his "plan," and his successors failing, condemned the theory as useless, and the plan as visionary. While wanting that prime essential of scientific success and permanence, the recognition of a natural law as its basic element of reasoning, it cannot hope to reach scientific perfection. The denial of the law of similars, and of its being the only *law* yet known to therapeutics, is no longer the denial of the claim of an "irregular sect," for from the undeniable proof of its success, both in study and practice, the denial now becomes an argument against nature rather than man, while rejecting it as the belief of an "irregular" body loses all its force when it is remembered that "regularity" consists in subscribing to the established code of ethics, and maintaining its exclusive tenets.

The code is the property of all schools alike, who would be ruled by its articles, and is ever subject to amendment or change, or complete annulment, and at most can have nothing to do with the science of cure, where nature becomes the guide; intended as a rule of action, it has long since become an inflexi-

ble band within whose circumference its old-school admirers make the round of their professional life, often finding it a more congenial guide to social and scientific duties than all else beside.

No test of scientific infallibility can be urged until all the secrets of nature have been given up to the keeping of man, for nature in the future as in the past will ever give her secrets to those whose lives are nearest her own—rather than to an exclusive order or gowned corps. To cure by contraries would be in truth to give remedies of such nature as to produce of themselves a set of symptoms exactly the opposite of those produced by the disease ; and since the exact opposite to any disease is perfect health, the difficulty of such practice becomes evident, when it is remembered that there is no remedy known of such power, and further that perfect health produces no symptoms, they being always an indication of morbid action. This leaves but the one alternative of claiming the treatment of disease to then be upon general and indirect grounds and never under the law of contrary action, as regards the symptoms produced by the treatment and those of the disease, since, as in inflammation, no remedy could produce its opposite, and more, that if any relation exists between

disease and its curative remedy it must be one of similarity of symptoms, since both disease and remedy act upon the same organ or function, and the symptoms become in both cases the evidence of morbid disturbance. Having but general principles to guide its followers in their choice of a remedy, he who pursues this practice must rest his success upon his individual judgment, or blindly follow his authorities, whose evidence is but their own experience, and in either case must fall far short of that scientific certainty whose authority is a well-proven law. When experience, by actual test, proves some plan of treatment wrong, by its high mortality, such knowledge is gained at expense of *life*, and yet no better plan was known, nor is there yet, for those who reject the law of *similars*, where the clinical value of a remedy is proven before it is applied to the treatment of disease. The founder of homœopathy, imbued with the spirit of his age, having seen the value of the law it was his fortune to discover, proceeded to account for its results by theories in keeping with his time, and to the speculations he gave is it now most indebted for its opposition. Those who blindly follow the master from his discovery to his theory must of necessity put themselves in opposition to the claims of modern

scientific research, and so retard its advance. His theories of disease having long since been proven faulty, should no longer cumber the priceless truth it was his to formulate; nor should credulity now bar the way of its advance. Nature, not man, is the final authority to which all theories must bow, and for her endorsement we should search. Homœopathy has for its mission the perfecting of the *materia medica*, not the development of a system of pathology, and when wrongly applied, or its claims unfairly urged, it can but meet, in such relation, the denial of nature and her laws, which otherwise are its support.

The law of similars finds its fulfillment when the choice of a remedy has been made in accordance with its indications; and thereafter, between it and the disease there must exist an antagonistic action. Of the exact nature of this action we can know nothing and can but judge the process by its effects. That both disease germ and drug action are antagonistic to health is proven by the fact of their equal power for inducing abnormal action within the sphere of the vital force, and from a condition of health resulting from their combined action within the system. This could result from antagonism only, between the morbid conditions

and remedial substance, and while the morbid changes continue the remedial dose needs repetition, thus proving the continued need of the one to neutralize the other.

The great difficulty in the way of all explanation of cures arises from the fact of having confounded the laws of health and disease, from trying to make them do duty for each other. The attempts at explanation are based upon the preconceived theories of aiding the *vis medicatrix naturæ*, by combining with its actions, and thus conflicting theories must ever arise when attempting to reconcile drug action with vital action, since the drug disease is as detrimental to the normal process as is the disease for which it is given. Much of this difficulty ceases when recognition is made of the law of morbid action, and the phenomena of cure then become a conflict between disease and drug action, thus leaving the vital force free to induce its normal conditions when the two conflicting forces have ceased to act. All explanations of cures resulting from a continuance of morbid action combined with drug action, is but adding theory to an evident law of nature. The law exacts that the remedy shall have the same power for disturbing the vital process as has the disease. This observation and experiment

proves, and the attempt to follow the discernible into the hidden processes of nature has given rise to the theories named. Whether the remedy combines with the *materies morbi*, or whether it exhausts the material upon which the disease feeds, we as yet know not, and until such knowledge is gained nothing but theories of cure can be advanced by either school. Until all forms of disease can be shown to be of the same nature, we can well doubt the correctness of all theories which imply a uniform mode of action of the remedy upon the disease, since in some cases we have to treat the exciting cause, in others the indirect cause, and in others again the manifest effect. When the disease is the result of poisonous germs still acting, our treatment is antidotal, or destructive to the morbid germ. In diseases of an inherited type our treatment has to do with the indirect cause and is curative by controlling the conditions to which inheritance gives rise. If the morbid condition be an inflammation of non-specific type our treatment has to do with the effects of the exciting cause, and must be directed to the anatomical changes existing, and any theory which would satisfactorily explain the one could not apply to the other, unless all cures occur in like manner, regardless of their cause or nature. This brings us to the

inevitable conclusion that the primary action is such as to neutralize the exciting cause, and to then allow the vital force to reassert its power. Recognizing the disease to be the result of an action in accordance with the law of morbid rather than vital conditions, and independent of the *vis medicatrix naturæ*, in all its effects, both as regards its *materies morbi* and the phenomena they induce, we have but to reconcile the process of cure as arising from combination of effects between morbid condition and drug action, leaving the vital force free to produce its phenomena, as soon as the others have ceased their effects. To the drug must be ascribed in all cases the most powerful action of the two, if allowed to produce its full effect, and in this is proven its control over disease, since poisons always destroy life if uncontrolled, while diseases do not ; hence in combination with disease the remedy displays its controlling power, by displacing the disease symptoms with its own, as in all combinations of natural forces the weaker yields to the stronger. Seeing then in the drug an element of more deadly potency than in the morbid condition itself, we rest our faith upon its inherent quality for controlling the phenomena or symptoms induced by the morbid germ, or disturbing ele-

ment of nature. That all diseases cannot be cured does not invalidate this law, since some are as yet without a known remedy while others are the result of that final breaking of vital power, and death occurs in natural order. Since both disease and remedy have affinity for certain parts of the body, the symptoms they induce, if acting alone, are of necessity alike, and in such language prove their ability for neutralizing each other; for from causing a *similar* disturbance, and symptoms, they prove themselves unable to long continue acting upon the same organ or function, and not exhaust its vital force, if such action be parallel when they act together. If such be the case nature could better withstand their separate rather than their parallel actions; yet experience proves the action of disease or poison to be more fatal alone than when in combination; thus proving that there must exist an antagonism between the two. Both having the same power for disturbing the vital process, they alike prove themselves foreign to its domain of action, and by inducing a corresponding set of symptoms prove their power to be under the same law, and since both produce morbid conditions again prove themselves foreign to the province of the vital force. Then, when the remedy is

applied to the cure of disease we apply the more powerful of the two agencies against the weaker, and in such manner control its primary action. They both disturb the vital force, and are ever incompatible with each other. An excess of either makes its presence known by its characteristic symptoms, and thus points to excessive or deficient quantity of the remedy. Their natural language being similar, from their vital disturbance being the same, they both prove themselves capable of acting upon the same tissues of the body, and thus the remedy which excites inflammation must have affinity for the same anatomical tissues, as has the morbid cause which induces inflammation; and as both when acting alone excite the inflammatory process, so when the one is brought into contact with the change the other has induced, it spends its force upon the disease germ if present, and if but the effects of the morbid cause remain then upon such abnormal product, from its being of lower vitality than the normal tissues, and hence most susceptible to drug action. In all cases of direct treatment of the disease or its product, the phenomena must develop in nature's order; primarily the exciting germ or cause must be removed or destroyed, and the product of the *materies morbi*

only, remaining the remedy by its own inherent power, supplies the force which the *vis medicatrix naturæ* lacks, in the one case neutralizing a poisonous germ—in another supplying a restorative principle, in another inducing disintegration of the morbid product, and so enables nature to remove the abnormal material which prevents a natural action; nature here, as throughout her whole domain, comes to man's assistance by saying, in all conditions of disease, the *symptoms* are our guide to remedial need, and the measure of its quantity. Homœopathy has ever met its most adverse criticism in relation to the smallness of its dose, and must ever continue to do so, while the theory of *high dilution* is urged as its essential of success. Beyond a certain point the division of matter, be it called a remedy or not, escapes all tests for its presence, and thus becomes the element for theoretical views alone. To be scientific the subject must be tangible, and if the bounds of the discernible be once left for the indefinite, no stopping-point could be found, and scientific research would thus end in boundless speculation. But however strong the argument urged against such practice, it can have no weight against the use of lower dilutions, or triturations, where the ques

tion would be one of *quantity* alone. To one ignorant of the requirements for successful practice in accordance with the law of similars, the amount of the remedy used by all its advocates still seems far too small to prove of value when judged by allopathic rules.

When it is remembered that a similar is always capable of producing an increase of the symptoms if given beyond a certain point, and that the therapeutic is then lost in the physiological or poisonous action of the drug, the first great reason for the small dose becomes apparent. Again the severity of the disease bears no fixed relation to the amount of morbid matter which produced it, and since the symptoms are not dependent upon the amount of pathological change for their severity, since some of the most fatal maladies leave but little anatomical change behind them, it will be seen that the symptoms become a better guide to remedial needs than are the pathological changes supposed to exist in any given case, and for which the large dose is always intended. When the remedy has within itself the inherent power for disturbing the vital functions, as does the disease, and by this power controls the symptoms, enough has been given, however small the quantity.

An abatement of symptoms is always proof sufficient that the remedial action is controlling the course of the malady, when its natural tendency would be to continue in full severity, and thus becomes the highest authority on dosage. The early idea of dose was dependent upon the theory that severity of symptoms needed heroic quantities of medicine to control them, and that disease could thus be crushed out by the amount of active material brought to bear against it, and still remains a proof of the age which gave it birth, and a fancied measure of power in the hands of its present advocates.

Seeing in the pathogenetic or disease-producing power of the drug a full picture of its curative value, the true homœopathist comes to the treatment of disease. Freed from the necessity of testing the active power of his medicine upon his patient, already weakened by disease, and finding a close relationship of symptoms to exist between the disease and one or more of his remedies, he administers them in small quantity, well knowing that just as they are similar, so are they capable of increasing the danger, if given in too large quantities, from adding drug disease to that already existing; and farther, that if the symptoms do not abate, his

skill is defective, not in having given too little medicine, but in not having found the most perfect similar to the malady. If his system still lacks perfection, and he oftentimes fails to cure, he is still conscious of not having decreased his patient's chance of life, by his treatment with untried or theoretical remedies; and while his old-school friend continues to test his medicines upon the sick, he extends his research for greater skill in more careful or extended *proving* of all substances having any effect over life and health, for the symptoms so presented are to him a picture of the possibilities of the substance value in the treatment of disease. Now, in approaching the end of this essay, the question returns with doubled force: Have we made plain the relation of homœopathy to natural science, and so arranged its truths that others of greater ability and more ready pen may be induced to take up the subject, and freeing medicine of its cumbrous load of error and theories, teach men that the divine mission of cure, coming from the heavenly sphere, endorsed alike by Deity and mortal, rises far above the narrow or selfish views of blind adherents to their respective systems, and thus places it upon the broad plane of applied science for humanity's needs; and where the pursuit of truth is made for truth's sake alone?

Here the student of medicine becomes truly the student of nature and her laws, and gathering the elements of our science into a complete whole, adds to the temple of medicine yet to be, where, cleared of its errors and doubts, it will rise far above the strife of mortals, sublime in the height and beauty of plan by the eternal architect designed. In such contemplation the student can find his incentive to labor, and his reward ; and in the present war of conflicting theories and factions gain confidence when he remembers, that as all men are the handiwork of creative power, so are the laws which govern such creations superior to the theories of the created.

THE END.

W. H. L.

